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CALENDAR FOR NOVEMBER.

"The wild November comes at last,
Beneath a veil of rain."

NOVEMBER, last and dreariest of the autumn months; few welcome thy return with pleasure: few mourn, even, when thy departing footsteps leave us to the mercy of winter, absolute and undoubted. To all inevitable things, a man can make up his mind. When the sun lies upon the hills and the bells are jingling through the streets, we cease to dream of summer, and bend our energies to the great science of keeping warm; but, hardly have we settled down to the conviction that the warm weather is all over, and that henceforth our pleasures are limited to in-doors, when a day dawns upon us so bright, so fair, that it is the very counterfeit of summer, and we wonder that the leaves do not mistake the season, and burst forth again in all the freshness of new life. A soft veil is thrown over the landscape, a hazy light, which makes a picture, a vision of the most common scenes.

There is a large, square field, and in that field a horse is grazing. There is another field adjoining, where three cows and a flock of sheep procure a scanty living among the rocks and dry blueberry bushes. A flock of crows flies over toward the pine woods that lie beyond. Nothing, in point of fact, could be more common-place, yet, through the soft haze of this NOVEMBER afternoon, how rich, how glorious is the picture. The bony old horse, whose ribs you have often counted with heartfelt sympathy, is a much-abused cart-horse no longer; he is one of Landseer's finest productions thrown upon the glowing canvas. And his neighbors in the next pasture have arranged themselves as with a special eye to artistic grouping. Even the crows overhead do not suggest the idea of a defunct animal down in the woods; no, they are part of the beautiful landscape view of which the distant mountains are the background, and the sun, the "skylight." The air, not, indeed, now fragant with flowers, but itself a mild, all-pervading influence, lulls you to the very borders of sleep and forgetfulness, and you think "how delightful is NOVEMBER." But in the night, the wind goes round to the north-east, and you wake the next morning, and find a wild rain driving over your landscape, your gallant steed of yesterday looks pitifully out of his stable window, a very raw-boned beast indeed. Your cows have disappeared—washed out, it would seem, by the flood, and the sheep have found a miserable shelter under a tumble-down shed. O, the dreariness of *November!* There is no satisfaction to be had out-of-doors, so you look within, for that domestic happiness which is supposed by some to be "the only bliss that has survived the fall!"

But over the family group it is fit we draw a veil, lest we should seem to be personal in our remarks. There *are* blithe spirits which defy even the depressing influences of an autumnal storm, but it might be a question whether there is not in such temperaments a want of sympathy with nature in any of her moods, a corresponding insensibility to the joyous sunlight, and the thousand charms of a beautiful day. But though we will, in courtesy, imagine the faces and the tempers of your household to be as unclouded in NOVEMBER as in June, we cannot conscientiously extend the same measure of courtesy to your house. A house in the country, standing by itself, can scarcely be

so well made that the rain will not beat in at some quarter. There are the window-sills all covered with towels to keep the water from the paper on the walls, and the curtains carefully tucked aside, and somewhere, "from garret to basement," there are weak points where the drippings will fall on unwary heads, and dark pools will run along the floors, though you may be very certain that Mr. Chip, the carpenter, stopped that leak a month ago. A cold moisture settles on everything you lay your hand upon, and doors open and shut with difficulty, which never stuck before. Then, if ever, one comes to a realizing sense of what Noah and his family must have experienced when "the rain fell upon the earth forty days and forty nights."

But even a NOVEMBER storm has its limits, and when the heavens have wept themselves dry, there come a few days of pale, diluted sunshine, intermitting with some of drizzly rain and cold, grey fog, which would penetrate to the bones of a Falstaff, and finally we are glad to settle down to the good, honest, sturdy cold of DECEMBER.

Not, however, till we have celebrated our annual feast-day—our passover—our *Thanksgiving* —that holiday most rational and peculiar of all holidays. There is the "meeting-house," well filled as to the male parishioners, and if there are vacancies at the other end of the pew, the good minister does not feel slighted, for certain affairs in the culinary line, at the parsonage, have taught him how to make allowances. He does not feel like being severe on those female members of his flock who obey the apostle's injunction, and, if they wish to know anything, ask their husbands at home! Still, he preaches an unusually long sermon on this day, the better to show his thankfulness, and the choir do an unusual amount of singing, and then all disperse to the great festival of the day—called dinner.

And what a similarity the *social boards* of the assembly would present to any person who should be empowered to visit them all. In the middle of the table lies the great turkey, who has gobbled his last gobble, and died "a blessed martyr" for his country's good. On one side of him lie a pair of chickens, whose ephemeral lives never looked upon the winter's snow, and on the other side, another pair from the same brood "are baked into a pie." Then, for dessert, there is a plum-pudding, and every kind of pie that the ingenuity of woman can invent. And there are stories from grandpapa, and talk of politics and crops between papa and uncle, and jests and foolish conversation among the cousins, and little side-snickerings and whisperings among the children. And the night closes in with a dance, or a game at blind-man's-buff, mingled with many reminiscences of other Thanksgivings, and a reverent naming of those who will never more gather with us in our earthly homes. For it is only to children, and very young people, that any anniversary is entirely without sadness. Yet how these meetings revive and keep alive feelings of brotherly love and interest. How they bring the thoughts into one channel, and by so doing, *socialize* not only families, but neighborhoods.

And when you, of your abundance, carry a great basket of provisions to your neighbor in her poverty, how is charity promoted in the giver and thankfulness in the recipient!

THE LEECH AS A WEATHER-GLASS.

The following curious account is from the London *Farmers' Magazine* for July, 1860:

The following observations on a leech were made by a gentleman who kept one several years for the above purpose: "A phial of water containing a leech was kept in the lower frame of a chamber window, so that when I looked in the morning I could know what would be the weather on the following day. If the weather proves serene and beautiful, the leech lies motionless at the bottom of the glass, and rolled together in a spiral form. If it rains before or after noon, it is found to have crept up to the top of its lodging, and there remains till the weather is settled. If we are to have wind, the poor prisoner gallops through its limpid habitation with amazing swiftness, and seldom rests till it begins to blow hard. If a remarkable storm of thunder and rain is to succeed, for some days before, it lodges almost continually out of the water, and discovers uneasiness in violent throes and convulsive motions. In the frost, as in clear weather, it lies at the bottom; and in snowy, as in rainy weather, it pitches its dwelling upon the very mouth of the phial. The leech was kept in an 8 oz. phial, about three-fourths filled with water. In the summer the water was changed once a-week, and in winter once a fortnight."

THE USE OF RAWHIDE.

How few persons know the value of rawhide. It seems almost strange to see them sell all of their "deacon" skins for the small sum of thirty or forty cents. Take a strip of well-tanned rawhide an inch wide, and a horse can hardly break it by pulling back—two of them he cannot break any way.

Cut into narrow strips and shave the hair off with a sharp knife, to use for bag-strings; the strings will outlast two sets of bags. Farmers know how perplexing it is to lend bags and have them returned minus strings.

It will out-last hoop iron (common) in any shape, and is stronger. It is good to wrap around a broken thill—better than iron.

Two sets of rawhide halters will last a man's life-time—(if he don't live too long.)

In some places the Spaniards use rawhide log-chains to work cattle with, cut into narrow strips and twisted together hawser fashion. It can be tanned so it will be soft and pliable like harness leather. Save a cow and "deacon's pelt" and try it.—*William Rhodes, in Country Gentleman.*

THE MAINE STATE SHOW.

Our brother farmers of Maine held their Annual Cattle Show and Fair at Portland, commencing on the 25th of September and continuing through the week,—one day having been added to the original time contemplated, owing to bad weather interfering with some of their arrangements. Having the good fortune to be present on the third and fourth days, we propose briefly to mention some of the things worthy of note that fell under our ken.

The grounds fitted up for the display of stock, &c., were on the top of Munjoy Hill, or rather on the eastern side, exposed to the full sweep of the winds, which made it rather uncomfortable most of the time we were there. The view from this spot is a lovely one, almost enough to overbalance its objections.

The show of stock was very good indeed, but it seemed to us not quite equal to that of the previous year.

There was quite a show of horses, but the Horse Show at Augusta, the week previous had letracted somewhat from this portion of the exhibition.

The trial of working oxen, on Wednesday, attracted much attention, and the animals showed docility, patience and good training in a remarkable manner.

As has been the custom of late years, at most of the Agricultural Shows, a large portion of the time and an undue proportion of the premiums, were devoted to the exhibition of fancy horses.

Sheep, swine and poultry were few in numbers, but of very good quality. A few of the flocks of fine wooled sheep from Somerset county, that we noticed at the last Show, would have added greatly to the attraction.

The show of manufactures, implements and fancy articles was held in the splendid City Hall building. We found this in many respects superior to any previous display by this Society. The fancy work was not very plenty, but we noticed some highly creditable specimens of feminine ingenuity and patience.

The Portland Horticultural Society united with the State Society, and made up an excellent show of fruit and flowers.

The Dairy department showed much falling off, both in quantity and quality, owing to the severe drought throughout the State.

The show of agricultural implements contained little that was new or striking. The household furnishing department was well filled.

CORN AND COB MEAL.—A correspondent of the Ohio *Cultivator*, who has fed not less than 5000 bushels, mostly ground in the Little Giant Mill, states with great confidence his conclusion that cob meal is the safest and cheapest feed that is raised in Ohio. Cattle that cost him $18 per head in the fall, brought him $45 69, after consuming only about 12 bushels, 70 lbs. in the ear per bushel, ground and cooked. Grinding and cooking, he affirms, doubles its value.

CHEAP RAILROADS.

I am gratified in a late number of the *Homestead* to see this matter broached. Although it is said the railroad whistle is now heard in every town in Connecticut, I infer from the amount of money which has been lost by railroads, that it is doubtful whether they will very soon come any nearer to our farms than they now are. Most of the farms in this State have more or less besides the produce of the farm to be conveyed to and from the railroads, and this is probably upon the increase; hence the great necessity of some other means of transport than that approached by our common roads. For this purpose wooden railroads, in my view, are meriting our consideration. They consist of two longitudinal sills, on which the wheels of a wagon are made to run, say four inches thick, one of sufficient width to admit of two pieces of scantling being spiked on, leaving a rut or space between them for the wheel of one side of a wagon to run on. The other side requires no rut, but should be of sufficient width to accommodate vehicles with axles of various lengths. The team, which travels between the sills on the earth, will draw a load with more ease than on a plank or macadamized road, no cross ties being required. These are easily made, indeed a teamster can carry two pieces of scantling two feet long, made like a wedge on end and side; these placed in the rut forward of the wheels will enable him to turn out at any place, and by this aid he can get a loaded wagon upon the road. A prop or brace may be attached to the hind axle to be applied going up hills to allow the team to rest, and on steep hills.

A common road should be made outside of these rails to go down on. The slight cost of this kind of road compared with other improved roads is certainly worthy of consideration, and they are well adapted to sandy and soft soils and hills, if not other lands.

More remains to be said in relation to them, but the shower which drove me into the house has passed, and I must away to the field.—*Homestead.*

PUTRIDITY IN WELLS.—Sometimes the water in wells suddenly acquires a putrid taste and smell, as though some animal matter was undergoing decay therein, yet which upon careful examination is found not to be the case. The *Homestead* tells of such an instance, and a remedy was found in the thorough agitation of the water, by working a chain pump for two hours, bringing the water more or less in contact with the air. The next day the water was as sweet as ever. In the case of a cistern of filtered rain water, the same remedy of agitation was resorted to with equal success.

For the New England Farmer.

A PROFITABLE FARM.

The question whether farming is profitable has been well discussed in your valuable paper, and the theory well developed. I have a few facts on the subject which I think may prove interesting and perhaps instructive to my brother farmers.

Not many days since I had the pleasure of visiting the farm of my old friend, ASA G. SHELDON, Esq., of Wilmington, and as I walked over his broad fields, and viewed the wonderful improvements that labor, rightly and intelligently directed, had produced, I determined to make a few notes of what I saw for the *N. E. Farmer*.

Mr. Sheldon has 1250 apple trees, of which 350 have been set 7 years, and are just beginning to bear; 300 ten and eleven years, 520, some full-grown and some set only a few years, and 80 twenty years. These last will bear five barrels apiece every other year.

All these trees are in fine growing condition, and will all be as valuable in twenty years as the best of them are at the present time.

The land on which they stand is common hard land, a gravelly loam, the subsoil gravel mixed with clay.

In answer to the question how many acres of improved swamp he had, the reply was, about twenty. This land was formerly covered with a growth of maple wood, but, by the indefatigable industry of Mr. Sheldon, the twenty acres have been cleared of trees and stumps and are now among the richest lands of the State. Ten acres are covered with the rankest growth of potatoes that I ever saw; some of the vines are six feet long, and cover the ground entirely.

I should suppose the potatoes would yield at the rate of a bushel to ten hills throughout the field. One acre of this land, I am told, has borne potatoes eight years in succession and the present crop is equal to any former one.

Such land is worth $30 more than upland per year to raise potatoes in. The other ten acres are in grass, and bear at the rate of 35 cwt. to the acre. Now for the figures.

80 trees at $20 each	$1,600
650 " 10 "	6,500
520 " 5 "	2,600
20 acres swamp at $300 per acre	6,000
Total	$16,700
Value of present crop of potatoes in the ground	$1,000

Let all doubters of the profits of farming visit Mr. Sheldon's farm, for "seeing is believing."

ADDISON FLINT.

North Reading, Mass., Sept. 4, 1860.

FLOWERS FOR WINTER.—Flowers intended for winter blooming, need a season of repose, especially tropical plants, such as geranium, fuchsia, &c., which should be allowed rest from growth during the months of July and August, by almost entirely withdrawing the supply of water. Of course the leaves will fall off, but the plants will be fitted to start into fresh and vigorous growth, as soon as the water is again supplied. Previous to this, the branches of the fuchsia should be pruned in, and water given sparingly at first, increasing the supply, as the young shoots grow. Geraniums should be partially shaded from the sun after they are cut down, which should be as soon as their flowering season is over. Until they are re-potted into smaller pots, about the beginning of the month of September, very little water should be given them. Geranium cuttings may be put in at the time they are cut down. For this purpose, select the shortest and stockiest shoots with a growing point, and divest them of most of their leaves; keep rather dry till they show symptoms of growth, and success is almost certain.—*Dollar Newspaper.*

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 2.

EAGLES.

Golden Eagle—Bird of Washington—Bald or White-Headed Eagle.

Leaving the family of the indolent Vultures, we pass to the second family of the rapacious birds, the *Falconidæ* (Falcons,) constituting by far the most numerous division of the diurnal Birds of Prey. They, in general, possess a daring, and often cruel spirit, and subsist almost wholly upon living prey, for the capture of which nature has eminently qualified them; yet the degree of courage manifested by different species is often widely at variance. They are solitary in their dispositions, exceedingly shy of man, and though a few are generally dispersed over our forests, and make occasional hostile inroads upon the poultry, the greater part prefer wild, mountainous districts for their retreat, particularly during the breeding season, and in general seldom molest the property of the farmer, while a few may be regarded as useful, from the number of annoying vermin and reptiles they destroy. Their extreme shyness has rendered the study of their history not a little difficult, and being generally few in numbers, there are some species concerning which but little is definitely known; and the long period required for many of the species to arrive at a mature state of plumage, as well as the diverse markings of the plumage of the different sexes of the same species, have given rise to serious difficulties in discriminating between different species, and the young and adult of the same; and it is surprising that ornithologists have not been led more frequently into errors.

Some twenty or more species embraced in this family are found to more or less inhabit New England, including as it does the Eagles, Hawks and Buzzards; but a few, however, are observed to be common, and the greater part are quite rare; and in various sections of the country, as the older forests are cleared away, the numbers of the more common species are every year diminishing. In this class of birds, the female is generally larger, and occasionally one-third larger, than the male, more courageous in hunting, and in the defence of her young, and of much handsomer plumage, as, indeed, is the case throughout the order; and but one brood of young is raised a year.

To the *Eagles* (forming the sub-family *Aquilinæ*,) is generally submitted the first rank, from their being the most powerful of all the birds of prey, as well as from their large size and noble aspect. Of the *true*, Eagles (genus *Aquila*,) the Golden Eagles, (*Aquila chrysætus*, Wil.; *Falco chrysætus*, Linn.,) is our only American repre-

sentative. This noble and daring bird is found throughout the northern parts of both continents, though nowhere common, inhabiting rough, mountainous regions, generally remote from man, and though a terror to the wild game of the forests, seldom molesting the property of the farmer. A few individuals, according to newspaper reports, are killed in different parts of New England every year, and the fact is always recorded as a thing worthy of notice. It is said to breed in almost inaccessible cliffs. The Ring-Tailed Eagle, (*Falco fulvus*, Wils.,) formerly supposed to be a distinct species, is now known to be a young Golden Eagle of the first year; but Wilson, supposing it distinct, in describing it, thus speaks of it: "This noble bird, in strength, spirit and activity, ranks among the first of its tribe. It is found, though sparingly dispersed, over the whole temperate and arctic regions, particularly the latter; breeding in high, precipitous rocks, always preferring a mountainous country." The adult Golden Eagle is three feet in length, and measures upwards of seven feet across the expanded wings. The color of the head and neck is a deep brown, bordered with tawny or ferruginous; general color of the rest of the plumage, dark brown. The lofty, soaring flight of the Eagle is proverbial, and of none is it less so than of the present species.

The Washington Eagle, or Bird of Washington, (*Haliætus Washingtoni*, Aud.,) is a very rare bird, and the largest of its tribe. It was first seen by Audubon in 1814, and by him its existence and history was for the first time made known to the world. It was not until some five years after this date, however, that he was successful in procuring a specimen, though in the mean time his ever watchful eye several times caught sight of it in his excursions, and only a heavy storm prevented his securing it some two years sooner. This truly majestic bird measures three feet seven inches in length, and *ten feet two inches* in extent; and from Mr. Audubon's description seems to be quite distinct from any other species, though in color somewhat resembling the young of the Sea Eagle, (*Falco albicilla*, Linn.,) of Europe. Though exceedingly rare, it seems to be widely distributed in the northern parts of America, breeding on high cliffs, and subsisting chiefly on fish, which it takes with ease, in the manner of the Fish Hawk or Osprey, and not by plundering this noble bird of its hard earned prey, as is the practice of the Bald Eagle. In the zoological report of Massachusetts it is spoken of as occasionally seen here in winter, and from an account I have recently received of an immense Eagle killed in Berkshire county, I hardly hesitate to consider it the same. Interesting extracts from Mr. Audubon's history of this bird might be given, did space permit. In reference to the name he has bestowed upon it, he observes: "The name which I have chosen for this new species of Eagle, 'THE BIRD OF WASHINGTON,' may, by some, be considered as preposterous and unfit; but as it is indisputably the noblest bird of its genus that has yet been discovered in the United States, I trust I shall be allowed to honor it with the name of one yet nobler, who was the saviour of his country, and whose name will ever be dear to it. * * * * If America has reason to be proud of her Washington, so has she to be proud of her Great Eagle."

The White Headed Eagle, or Bald Eagle, (*Haliætus lucocephalus*, Sav.; *Falco lucocephalus*, Linn.,) the young birds being also known as the Gray Eagle, is found throughout the northern parts of both continents, but is said to be more numerous in North America than elsewhere, and being our chosen national emblem, is, perhaps, the more worthy of particular notice. Concerning this daring tyrant of the air, I wish I could present the reader with the felicitous descriptions of both Wilson and Audubon, but must be content with condensing from the elaborate accounts of these admirable authors the more important points in its history, with perhaps brief extracts in their own words. At certain seasons, this species is generally dispersed over the New England States, and is the most common of our Eagles; but during summer is more confined to the sea-shores, or the larger rivers and lakes, to obtain the fish that form its chief food at this season, and it is said to be always quite abundant about the Falls of Niagara. Geese, swans, ducks and other water fowls, together with pigs, lambs, and sometimes young fawns, furnish it with abundant food during the remainder of the year, and which generally fall an easy prey; but in times of great scarcity it will descend to partake of the most putrid carrion; and the collected groups of gormandizing vultures, as Wilson observes, "on the approach of this dignified personage, instantly disperse, and make way for their master, waiting his departure in solemn silence, and at a respectful distance, on the adjacent trees." His great strength, unequalled power of flight, reckless daring and cool courage, render him conspicuous at all times among his fellow-inhabitants of the air; while his cruel, overbearing and tyrannical disposition is not a less distinguishing characteristic. And though so well qualified to procure his own subsistence, no sooner does spring open, and the Fish Hawk appear over our lakes and rivers, and along the sea-shore, than he at once becomes a selfish oppressor of this admirable bird, systematically watching his manœuvers, and robbing him of his well-earned prey, whenever his appetite prompts him, subsisting for months almost wholly on the labors of this regal fisher. His manner of capturing the swan in the air, and the pair acting in concert to worry the ducks and geese that, by diving beneath the waters, seem able to elude these destroyers—the male and female darting alternately upon them as they rise to the surface—at once evince the cunning and perseverance of this bird.

This Eagle breeds in trees, building a large nest of coarse sticks three to five feet in length, pieces of turf, rank weeds, &c., the whole forming a ponderous mass, six or more feet in diameter, and often as many deep, and visible at great distances. The same nest is often occupied for several years in succession. Incubation often commences in January; and while the young are in the nest, it is perilous to attempt an approach to it.

The White-Headed Eagle measures three feet or a little less in length; extent of wings generally seven feet. Color of the head, neck and tail, in the adult birds, pure white, sometimes inclining to yellowish; and the whiteness of the head probably suggested the epithet *bald*, applied to this eagle, as the whole head is thickly clothed

with feathers; plumage of the body and wings a deep chocolate brown. The following extract from Wilson's account may throw more light upon its history. "Formed by nature for braving the severest cold; feeding equally upon the produce of the sea and of the land; possessing powers of flight capable of outstripping even the tempests themselves; unawed by anything but man; and from the ethereal heights to which he soars, looking abroad at one glance, over an innumerable expanse of forests, fields, lakes and ocean deep below him, he appears indifferent to the little localities of change of seasons; as, in a few minutes, he can pass from summer to winter, from the lower to the higher region of the atmosphere, the abode of eternal cold, and then descend, at will, to the torrid or the arctic regions of the earth." J. A. A.

TREE PLANTING.

"Have you never heard of the student, who, on being told that the crow would sometimes live a hundred years, bought a young crow to try the experiment?" Yes, indeed, we have heard of him —the irony is excellent—and of Dr. Johnson's growl about "the frightful interval between the seed and the timber." Still, we say, plant trees. They who plant at once, instead of wasting their breath in selfish complaints of the shortness of life, find luxuriant foliage waving over them much sooner than they expected. But, whether you live to see the maturity of your trees or not, be benevolent enough to plant for posterity. Transmit to your children the inheritance of rural beauty received from your fathers, greatly augmented. By all means plant, and plant well, and the result will overpay the labor. And let not your work end with planting. Feed your trees from year to year with generous food, and guard them from injury. And, in the words (slightly altered) of an old planter: "What joy may you have in seeing the success of your labors while you live, and in leaving behind you, to your heirs or successors, a work that, many years after your death, shall record your love to your country! And the rather, when you consider to what length of time your work is like to last." If you have country homes to embellish, be content with simplicity. Remember that a great establishment is a great care, and that the proprietor is apt to become a slave to it. Let your dwelling-places be marked with what painters call "repose." Make them the abodes of comfort and refined enjoyment, places which will always afford you agreeable occupation, but not oppress you with care.—*North American Review.*

To Protect a Shingle Roof from Fire.—The editor of the *Albany Knickerbocker* says, that a wash composed of lime, salt and fine sand or wood ashes, put on the ordinary way of whitewashing, renders the roof fifty-fold more safe against taking fire from falling cinders, or otherwise in case of fires in the vicinity. It pays the expense a hundred-fold in its preserving influence against the effect of the weather. The older and more weather-beaten the shingles, the more benefit derived; such shingles are generally more or less warped, rough and cracked. The application of the wash, by wetting the upper surface, restores them at once to their original or first form, thereby closing the space between the shingles, and the lime and sand, by filling up the cracks and posts, in the shingle itself prevents its warping for years if not forever.

For the New England Farmer.

MOWING MACHINES.

"Lest men suspect your tale untrue,
Keep probability in view."

Mr. Editor:—In your monthly for September, I notice an article on the 427th page, "A new trial of an old machine," you call it. You say that you witnessed Nourse, Mason & Co.'s Ketchum mowing machine cut an acre in twenty-four (24) minutes, and further state, that "Mr. Shurtleff and several of the bystanders told you that an acre was cut, and cut well, the day before, in fifteen minutes."

The mower cut a swath five and one-half feet wide, (5½) or just one-third of a rod wide. Now an acre one-third of a rod wide, would be four hundred and eighty (480) rods long, or just one and a half miles. Thus the team must have been driven at the rate of six miles per hour, which is a good smart trot.

But suppose the acres to have been a square of 10 rods by 16, you must go round it fifteen times, making sixty quarter (¼) turns, and at each end, the horses had to go about a rod beyond the grass, and with the extra travel on the coming in, will make another quarter of a mile travel, making 6¼ miles travel per hour. You do not give the shape of the acre mowed, but the one I have supposed, would be as favorable as would usually be laid off. Then think of turning on a right angle sixty times, and usually having to back a little, owing to having gone out too far. It would take the best part of 15 minutes to make the 60 stops and ¼ turns, particularly if you were turning at the rate of 6¼ miles per hour. Why did they not show you their best work, and not be about two-thirds longer mowing their acre, that day, than they were the day before? That a paced acre can be cut in 24 minutes, I will not doubt, but I do not believe that a guessed acre can be cut in 15 minutes.

I once heard a man say "he could reap a *guessed* acre in a day with ease, and he could reap a *paced* acre, but he'd be d— if he would reap a chained acre, any way." Figures.

Remarks.—We recognize the hand of an old and valued correspondent in the above. We have long been in the habit of *pacing* out acres in our farm operations, and believe we come out pretty nearly correct. We stated what we did, and saw on Mr. Shurtleff's farm, and cannot doubt now but it was substantially correct. The horses employed did not trot, but they were large and powerful, and moved all the time on a very fast walk. Our friend's quotation may answer for his poetic temperament—but for our matter-of-fact purposes, we did not pause to temporize with the truth, but went straight forward to the work, and stated it just as it occurred. When our horses

travel on a "good smart trot," and keep on so for an hour, they make about *ten* miles, instead of six.

POVERTY NOT SO GREAT A CURSE.

If there is any thing in the world that a young man should be more thankful for than another, it is the poverty which necessitates his starting in life under very great disadvantages. Poverty is one of the best tests of human quality in existence. A triumph over it is like graduating with honor from West Point. It demonstrates stuff and stamina. It is a certificate of worthy labor. creditably performed. A young man who cannot stand the test, is not worth anything. He can never rise above a drudge, or a pauper. A young man who cannot feel his will harden, as the yoke of poverty presses upon him, and his pluck rise with every difficulty poverty throws in his way, may as well retire into some corner and hide himself. Poverty saves a thousand times more men than it ruins; for it only ruins those who are not particularly worth saving, while it saves multitudes of those whom wealth would have ruined. If any young man who reads this, is so unfortunate as to be rich, I give him my pity. I pity you, my rich young friend, because you are in danger. You lack one stimulus to effort and excellence, which your poor companion possesses. You will be very apt, if you have a soft spot in your head, to think yourself above him, and that sort of thing makes you mean, and injures you. With full pockets and full stomach, and fine linen and broadcloth on your back, your heart and soul plethoric, in the race of your life, you will find yourself surpassed by all the poor boys around you, before you know it.

No, my boy, if you are poor, thank God and take courage; for He intends to give you a chance to make something of yourself. If you had plenty of money, ten chances to one, it would spoil you for all useful purposes. Do you lack education? Have you been cut short in the text book? Remember that education, like some other things, does not consist in the multitude of things a man possesses. What can you do? That is the question that settles the business for you. Do you know your business? Do you know men, and how to deal with them? Has your mind, by any means whatsoever, received that discipline which gives to its action power and faculty? If so, then you are more of a man, and a thousand times better educated than the fellow who graduates from colleges with his brains full of stuff that he cannot apply to the practical business of life—stuff, the acquisition of which has been in no sense a disciplinary process as far as he is concerned. There are very few men in this world less than thirty years of age, unmarried, who can afford to be rich. One of the greatest benefits to be reaped from great financial disasters, is the saving a large crop of young men.—*Timothy Titcomb.*

LONG ISLAND LANDS.—Application has been made to us for the pamphlet on the Long Island Lands to which we referred last week. We have but a single copy. It can be obtained by sending to J. G. ELLIOTT, Esq., 54 Wall Street, N. Y., Box 3443.

For the New England Farmer.

CAUSE OF THE POTATO ROT.

MR. EDITOR:—I have heretofore offered *seven reasons*, to show that the potato rot is not, and can not, be caused by insects. No attempt has, as yet, been made to answer any one of these seven reasons, or to show that they are not well founded in the nature of things, or in point of fact. They seem to be regarded as impregnable and unanswerable. It is true, Mr. Lyman Reed, of Baltimore, has published a *certificate* from seventeen members of Congress, who assert that, on a certain day, at Washington, the capital of the nation, they saw, by the aid of the microscope, certain *insects*, on some potatoes, in the act of sucking and biting them; and, hence, they jumped at the conclusion, already forestalled by the assertions of Mr. Reed, that these and such like insects are the cause of the potato rot. Such certificates and assertions do not prove anything. They only go to show how liable the most gifted minds, are to be deceived, and to substitute, for the cause of a thing its effect, or consequent, or concomitant.

Let it be admitted, for I have no disposition to deny that those seventeen members of Congress actually saw what they say they saw, insects on those decaying and rotten potatoes; were they, therefore, justified in jumping at the conclusion, and drawing the inference they did? By no means! Before I draw any such conclusion or inference, I wish to make a great many inquiries, examinations and investigations, and ask a great many questions. I wish to know what causes vegetables generally to rot and decay? Is there any general or known law relating to the rot and decay of vegetables? If so, what is it? If insects of some kind are always found, by the aid of the microscope, in all incipient decomposition, does this fact prove, that they cause the rot and decay? Is it a fact, that insects cause all the vegetables which they bite to rot and decay? If not all, which ones in particular, and why? If I can obtain a satisfactory answer to the above questions, I believe I can explain the cause of the potato rot to the satisfaction of every one who has no personal or pecuniary interest to subserve.

It would be strange, indeed, if some kind of insects were not found, by the aid of the microscope, in all kinds of rotten and decaying vegetables. This is as true of rotten vegetables, as of rotten animals. All dead animals waste away and are consumed by insects, while their death has been owing to other causes. No one, for instance, who finds a dead horse full of maggots, for a moment believes that the maggots have killed the horse, though they be found in every part of the dead animal. And what is so manifestly true with regard to a dead horse, may be, and probably is, equally true with regard to dead vegetables. If it be unreasonable to believe that the maggots have killed the horse, it is equally unreasonable to believe that insects are the cause of the potato rot, because they happen to be found upon the rotten tubers. They may be the consequent or concomitant of the rot, but not the cause of it.

Besides it seem to me strange, passing strange; in fact, the idea seems preposterous, that insects, by the mere act of eating or sucking potatoes, on which they subsist, and which are necessary to their subsistence, should infuse a deadly poison

into them, causing them to rot, and thus not only destroy their own food and that of their offspring, but also destroy their own future offspring by causing the very potatoes to rot, on which their nits or eggs are laid. This is a species of insecticide not laid down in any of the books, and is far from being a true representation of insect economy. At least, it is not thus with other insects. They do not poison the vegetables on which they subsist. They bite them; they suck them; they devour them; but they do not poison them and cause them to rot. There is no venom in their bite; so that the vegetables, thus bitten and wounded by them, do not blast and rot at a precise, exact time, and at a particular season of the year, always taking place within the limits of a very few days.

This, if true with regard to the potato rot, must be regarded as the commencement of a new and strange economy of vegetable and insect life. For these potato insects not only destroy what they eat, but they poison what they do not eat, and render it useless to themselves and others. It will require the most positive, direct and convincing proof to show, that insects infuse a poison into potatoes sufficient to cause them to rot; whereas, it is very easy to prove that the various kinds of insects breed in rotten and decaying vegetables, while the rot and decay are owing to other causes.

Besides, how can we defend the instincts of these potato insects which lead them to poison and destroy the very vegetables on which they and their whole race depend for subsistence? No other insects behave in this manner! No other insects are endowed with such absurd and preposterous instincts! JOHN GOLDSBURY.

Warwick, Mass., 1860.

PHOSPHORUS---SOURCE AND NATURE.

Phosphorus is but sparingly diffused as a component of minerals—it is to the animal kingdom that we turn for our supplies—to bones and fluids of the body. These are our magazines of phosphorus, from which it is extracted in large quantities now required for matches and the other manufactures into which it enters.

The leading characteristic of phosphorus is its extreme combustibility. Place a small fragment of it in a glass tube, apply heat and ignite it, when, on impelling a current of air through the tube, the phosphorus burns with great rapidity. The combustion having terminated, two different residues are produced, one a red colored substance and the other a white one. The latter, or white, is an acid compound of phosphorus with oxygen. The former was long imagined to be a combination of phosphorus with oxygen, also, but in a lesser ratio than necessary to constitute an acid. Within the last few years, however, M. Schrotter, of Vienna, demonstrated that the red compound in question was merely phosphorus. No combination has taken place to form this compound, but the phosphorus has assumed a second, or allotropic condition, just as sulphur does under the operation of heat.

Common phosphorus has to be kept in water, for the purpose of guarding against spontaneous combustion; allotropic phosphorus, however, may be kept unchanged in atmospheric air; indeed it may be wrapped up in paper, and carried in the pocket even with impunity. Common phosphorus readily disolves in the sulphuret of carbon, whereas allotropic phosphorus does not.

Phosphorus exists in all grains, and it forms a minute portion of every loaf of bread we eat. It exists in the human brain, but the greatest quantity of it is found combined with lime in the bones of animals. The phosphate of lime sells at high prices, as a fertilizing agent, simply because it is a substance difficult to obtain large quantities of. Unlike sulphur and lime, which are obtained most abundantly from the mineral world, all our phosphorus is obtained from organic creation.—*Scientific American.*

For the New England Farmer.

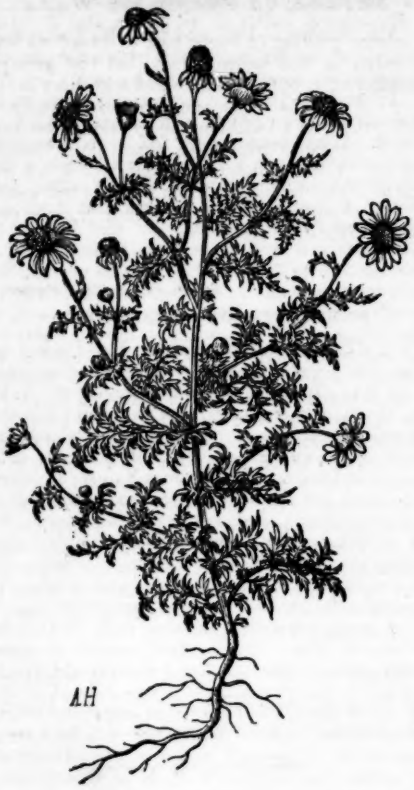
FERTILITY OF MOUNTAINS.

MR. EDITOR:—In examining the *Farmer* of Sept. 8th, I find a few rather singular ideas (that is, to me,) advanced. Your correspondent, "S. P. M.," I see, is trying to give us an insight into the gigantic operations of nature to bring about the result of rendering soil lying at the base of a mountain fertile. That Dame Nature at times does bring into the field all her tremendous forces no one questions. But is it not in the general order of things, that a more silent, unobtrusive agency is employed? The constant attrition of water running down the slopes of a mountain will wear away the hardest rock; it is borne to the plains below to rejuvenate the famished soil. The winds of heaven, laden with a great variety of compounds, among which are free carbonic acid, which vegetation absorbs, and the compounds of nitrogen which the soil will absorb in large quantities, will go farther toward fitting the soil for a crop than all the rocks and boulders precipitated to the plains by Friend "S. P. M.'s" frost-power. How in the name of reason are nodules of rock, of any size, lying loose and scattered on the surface, to be disintegrated? I cannot tell, nor do I believe that "S. P. M." can. Not many miles from the town in which I reside, is a tract of land lying at the base of the Green Mountains, but so far removed that the rocks and boulders, to do their utmost, cannot reach it. This tract is from one-half mile to two miles in width, and fifteen or twenty miles in length, a share of which has been under cultivation 30, 40, and some as long as 60 years. It will produce about one crop of corn, then three or four crops of rye; then it wants rest two or three years, when the same rotation can be gone through with again, and this without manure. The land is full of small stones rarely weighing as much as 50 pounds, and from that down to the smallest pebble. They are composed mostly of silica. Now how is soil rendered fertile short of the action of the atmosphere? I see no other solution of the question. Can any one else? REGULUS.

Ripton, Vt., Sept. 15, 1860.

SHEEP MANURE.—In England land is sometimes manured by confining sheep at night on a small surface, and moving the fence or hurdles, till the whole field has been treated to a few nights' lodging. The dressing thus given by 300 sheep, Stephens says, is sufficient in a week for an acre, and is worth fifteen dollars.

GARDEN CHAMOMILE.



In our boyhood we enjoyed the great privilege of running at will through a well-kept garden, stored, in their season, with fruits, flowers and vegetables. Sometimes we were pressed into service there, so that we got lessons in right angles as well as straight lines, and became skilful in weeding, thinning, &c. The impressions made in that garden upon our ductile mind, and the knowledge gained in that miniature world, have never been forgotten, and never will be effaced from our memory, so long as reason remains. We would not part with those early impressions for a kingdom. They well up, fresh as yesterday, introducing anew a troop of loving brothers and sisters, respected parents, or friendly neighbors, "walking in the garden," tasting this or plucking that, or mingling in sweet converse under the friendly shade of trees bending with fruit! Not one is missing in the group that the remembrances renew, though some have ascended to the garden in Paradise above.

In one of the angles of this garden was a large *chamomile bed*, as thick as a mat, as green as a leek, and the spot we ran to and rolled upon when our rows were weeded out. There was fun in it, and there was fragrance, too; for like some good persons, it did not show its virtues until trodden upon or pressed in some other way. Possibly, kind reader, you, too, may have frolicked with brothers and sisters on a chamomile bed in childhood, and that figuring and speaking of it here, may revive in you some pleasant recollections of those early days. Darlington, in his charming book on "American Weeds and Useful Plants," says:

"The whole plant, (and particularly the heads of flowers,) is a fine aromatic bitter, and deservedly popular as a tonic medicine,—for which purpose it is generally cultivated. It is an old and still prevalent opinion, that this plant thrives better for being trampled upon or kept prostrate, whence it was popularly called '*the Whig Plant*' during the revolutionary contest in the United States. The notion is thus incidentally alluded to by Shakespeare, in the first part of his *King Henry IV.* 'For though the Camomile, the more it is trodden on the faster it grows—yet youth, the more it is wasted the sooner it wears.' This is said to be naturalized in Delaware; another species is quite common about New York, *A. arvensis, L.*, which has the leaves less divided and the chaff of the receptacle pointed."

For the New England Farmer.

PIANO vs. WASH-TUB.

Mr. Editor:—The farmers' wives and farmers' daughters have been patiently heard through the columns of your valuable paper, and now will you be so kind as to grant an old spinster a similar favor?

I am not a farmer's wife or a farmer's daughter, but nothwithstanding this, I profess to know something about indoors farming, and do know that where there is a will there is a way. As far as work is concerned, I do not think the farmer's wife has, as a general thing, a great many over-tasks to perform; there may be some exceptions, no doubt there are, but generally the husband has much the heaviest burden to bear; he has, in addition to the management of his farm, to provide for every necessity, both in doors and out, and his evenings are usually spent (if he is industrious, as all good farmers are,) in a manner alike useful to himself and family. At this season of the year, you will find him at work, and often until a late hour, at night, either husking corn or paring apples, and very often of a rainy day, while his wife "bakes and brews," you will find him busy at the churn, and he performs his tasks cheerfully. He does not desire to squander his time by the side of some musical instrument, while others perform the tasks which of right belong to him. Let the wife exercise an equal amount of patience, and domestic squalls would be less frequent.

Why, my dear good ladies, just compare your lot, if you please, with that of your grandmothers'; compare the old fire-place with its big crane and pot hooks, and the old brick oven, with your stoves of the present day, so convenient and handy; and your churns, with the old upright bungling thing of a half a century ago; and then you may go on comparing ancient with modern, until you can but come to the conclusion that you bear

light burdens compared with your grandmothers. The only piano they ever knew was the spinning wheel and loom, the only seraphine the wash-tub and churn, and, in fact, no music sounded sweeter to the ear of our mothers and grandmothers, than the cackling of the hens, ducks, turkeys and geese, when mingled with the lowing of the herds and squealing of the pigs; and they were thought to be far below the generality of women, unless they raised from ten to fourteen fat and rugged girls and boys, and provided them all with clothing, both summer and winter, and spun and wove with their own hands. They were educated as farmers' wives should be educated; not to play on a piano, or make pictures, but to *spin* and *weave*. "*bake* and *brew*, *make* and *mend*," while their husbands would plow and sow, mow and rake, reap and thrash; and in nine cases out of ten, they were contented with their lot!

If the farmers' daughters of the present day are afraid to marry farmers because there is work to be done, they ought to remain single, like this

OLD SPINSTER.

Claremont, N. H., Sept. 24, 1860.

For the New England Farmer.

RUSTIC PICTURES.

It is a frequent complaint that a farmer's house must be destitute of many of those "adornings" which make home cheery, "for want of profits." Pictures are referred to. It is a fact that fine paintings or engravings are so high-priced that many families, farmers and others, are unable to purchase them. Yet I think there are several ways by which we poor unfortunate (?) farmers' daughters may obtain substitutes, quite as pretty, and with trifling expense. Have you ever preserved autumn leaves? Now, while the trees are in their glory, try it. Gather fair leaves of many varieties and colors, and press them until perfectly dry. Then arrange them in wreaths or bouquets upon fine drawing paper, fastening with gum arabic, and varnish them with white varnish. A picture is of little value unless it brings the reality to the mind's eye. What a panorama of life-scenes this simple autumn wreath calls forth!

Here is a golden hickory leaf—do you think of those mornings, those chill, cold mornings, when we climbed the hill, the grass crisp with frost, crackling with every step,—to the walnut trees upon the summit, and how we watched for sunrise ere we filled our baskets, and wondered why we were in the sunlight first, while home, in the valley, lay sleeping in shadow?

A crimson maple—a May day scene, when wistful, longing eyes have vainly searched for violets and wild-flowers, and a maple is discovered with its red banner unfurled. Were ever flowers so beautiful? Yellow birch—with one consent, we'll pass it by, with its unwelcome visions of unlearned tasks and broken rules! Brown oak,—the proud old oak by the school-house,—would you like to swing on its branches now? Ferns,—how they bend to kiss the water which goes laughing on over the stones! But I am writing too long. Just try it, farmers' girls—and mark, if you have not pictures upon the walls that will talk to your hearts through the winter days, of which these autumn leaves are "avant couriers."

Sept. 26. ANNA.

For the New England Farmer.

SMYRNA, OR BEARDLESS WHEAT.

MR. BROWN:—Enclosed with this I send you a sample of my Smyrna wheat, grown the past two years on the town farm under my care.

I found the land of a light, sandy loam, with a subsoil of loose gravel and coarse sand, 4 1-5 acres. It had been planted and sowed alternately with corn and rye, with no manure except that which was put in the hill, and that rather sparingly. I plowed twice one year last April, and top-dressed with meadow mud and lime, 2 1-5 acres last year, and 2 acres the present year, allowing 3 casks of lime and 3 cords of mud that had been exposed to the action of the frost the previous winter, to the acre. This compost, after being mixed three times in ten days, was spread evenly on the land before sowing the wheat. I then sowed 2 1-5 acres thus prepared with 5 bushels of Smyrna, or beardless wheat, and in August I gathered what yielded 47½ bushels of the best wheat I have ever seen. I had from 5 bushels and 11 qts., 201½ lbs. of superfine extra flour. I have managed the other two acres the past season in the same way, and have 42 bushels of clean wheat, like the sample I send you. I would state that the Middlesex South Agricultural Society, last year, gave me a premium of ten dollars for my experiments with manure as shown by the above results. ISAAC OSGOOD.

Marlboro', Sept., 1860.

REMARKS.—We thank you for the wheat and for the good example set your brother farmers, and especially for the detailed account sent us.

SLEEP.

There is no fact more clearly established in the physiology of man than this, that the brain expends its energies and itself during the hours of wakefulness, and that these are recuperated during sleep; if the recuperation does not equal the expenditure, the brain withers—this is insanity.

Thus it is that, in early English history, persons who were condemned to death by being prevented from sleeping always died raving maniacs; thus it is, also, that those who are starved to death become insane; the brain is not nourished, and they cannot sleep. The practical inferences are these:

1. Those who think most, who do most brain work, require most sleep.

2. That time saved from necessary sleep is infallibly destructive to mind, body and estate.

3. Give yourself, your children, your servants—give all that are under you the fullest amount of sleep they will take, by compelling them to go to bed at some regular, early hour, and to rise in the morning the moment they awake; and, within a fortnight, nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system.

This is the only safe and sufficient rule—and as to the question how much sleep any one requires, each must be a rule for himself—great nature will never fail to write it out to the observer under the regulations just given.—*Dr. Spicer.*

For the New England Farmer.

CHOLERA.

MR. EDITOR:—As you have occasionally published articles on dietetics and the means of preserving health, and as I consider experimental knowledge preferable to theoretical, I thought I would relate a concise history of my own case which recently took place. In the month of July last I was prostrated for a few days with a short fever, and when I got about again my appetite continued poor, till the 16th of August, at 8 P. M., when, to my wonderment, for the first time in my life, I was suddenly attacked with the cholera, and experienced every variety of symptom concomitant with that disease, from the ejections up and down to the cramp and cold sweats. Being unable to swallow the least particle of anything, I took nothing for eighteen hours, not even an anodyne; the only application made to me was a chunk of hot marble to my feet and a plenty of blankets at the time of the cold sweats and spasms. Thinking that probably my last hour had arrived, unless I had sufficient vitality remaining, with the help of the blankets and marble, to produce reaction, I began to realize an abatement of the agonies of the cold and cramps, which gradually subsided, and were followed by warm sweating. My distress continued seven or eight hours. This is experimental knowledge.

Now for theoretical prescriptions. I have been amused beyond measure, since my recovery, at reading the sage advice of the author of a publication called the "London Practice of Physic for the use of young Practitioners." After describing the symptoms of the cholera with the wisdom of Esculapius, he advises the young practitioners to the following course of treatment: "Chicken-broth should be freely drank to the quantity of six or eight quarts, and as fast as possible; milk and warm water, new churned buttermilk, decoctions of rice and barley, &c."

Now in the name of common sense what man, sick or well, could survive such an administration of the bounties of Providence. I wish the author a chance to follow his own prescriptions and see if it would not change his opinion in giving advice to young physicians. Medical writers who will give such absurd instructions to young physicians ought to be punished for their stupidity and rashness. I fully believe if I had forced down one pint of chicken-broth or buttermilk, it would have been my last attempt at taking medicine.

I fully concur with Prof. Holmes in his sentiments delivered in his discourse at the last annual meeting of the members of the Massachusetts Medical Society. For more than forty years I have been persuaded that medicine, as it is used, does more hurt than good, and unless medicine can be used with more discretion, the world would be better off if it were all cast into Etna's crater.

SILAS BROWN.

North Wilmington, Sept. 15, 1860.

THE USE OF QUAILS.—Wm. Norton, an intelligent, observing farmer boy, who makes his home in the southern part of Illinois, has recently been studying the habits of the quail, or incorrectly, "partridge," and gives the following testimony to the Cincinnati *Artisan:* He observed a small flock commencing at one side of the field, taking about five rows, following them regularly through the field, scratching and picking about every hill, till they came to the other side of the field; then taking another five rows on their return, thus continuing till he thought they were certainly pulling up the corn. He shot one, and then proceeded to examine the corn ground. On all the ground that they had been over, he found but one stalk of corn disturbed; that was scratched nearly out of the ground, but the kernel was still attached to the stalk. In the crop of the quail, he found but one cut worm, 21 striped vine bugs, 100 chintz bugs, that still retained their individuality, a mass apparently consisting of hundreds of chintz bugs, but not one kernel of corn."

WATER CISTERNS.

Every farm establishment should be provided with a capacious and conveniently located water cistern. If the farm buildings are numerous and compactly situated, a very small expenditure will answer for the construction of all the apparatus requisite for conducting the water from the roofs into the reservoir, which, for greater convenience, should be located in some place where it may supply the wants of the animals in the yards during winter, as well as the household.

The convenience and value of such an arrangement will be particularly obvious during seasons of protracted drought, or accidents from fire. In the latter emergency, where recourse is had to ordinary wells, too much time is expended in drawing or pumping, especially when the fountain is at a considerable distance below the surface; but a cistern being situated more superficially, with regard to its contents, is at all times within immediate reach, and may be made to pour forth its treasures at a moment's warning. By furnishing troughs where the water is required, a system of pipes will be found highly convenient, as through them the water may be conveyed, in any quantity, and at all times, to the yards or places required.

Good and substantial reservoirs, perfectly water tight, may be formed of split stone, brick, plank, or even without either, the interior surface as well as the bottom being covered with two or three coatings of cement. We have known them made by cementing directly upon the earth, but in our climate of penetrating frosts, such would not be the best way. They may be made square, oval or round; but made in the form of an egg, they are very strong, and require no "deck" or top covering, as the opening in the top may be only a little larger than a man's body, so that he can enter it occasionally to clean it out.

In a cistern constructed in this manner, the water will soon become clear and fit for family use, if the roofs of the buildings upon which it falls are kept ordinarily clean. Where there is

a good cistern at, or near the house, there is a feeling of safety and comfort, which one can scarcely have without it, and these pleasurable emotions are considerably heightened by the fact that it is an economical arrangement for supplying water. But the cistern has another recommendation of more value than either of these, viz: It provides the women with those indispensable conveniences, without which we do not believe a good, genial temper and a pervading harmony can long exist in the household. Men build their fine barns, purchase their mowing machines, newly-modeled plows, &c., and too often leave the women to go ten rods and draw water with an old creaking sweep from a forty foot well, or allow them to chop the wood with which to cook the breakfast, or keep the children warm. Nothing tends more to good order and serenity of temper in the house, and the comfort and economy of all its affairs, than the existence of the numberless and nameless little conveniences which enable each one to perform his or her part of the household duties with facility and ease—and among them all, none is more important than a *plenty of pure soft water, near at hand.*

FACTS FOR FARMERS.

If you invest money in tools, and then leave them exposed to the weather, it is the same as loaning money to a spendthrift without security —a dead loss in both cases.

If you invest money in books, and never read them, it is the same as putting your money into a bank, but never drawing either principal or interest.

If you invest money in fine stock, and do not feed and protect them, and properly care for them, it is the same as dressing your wife in silk to do kitchen work.

If you invest your money in choice fruits, and do not guard and give them a chance to grow and prove their value, it is the same as putting a good hand into the field with poor tools to work with.

If you invest your money in a good farm, and do not cultivate it well, it is the same as marrying a good wife, and so abusing and enslaving her as to crush her energies and break her heart.

If you invest your money in a fine house, and do not so cultivate your mind and taste as to adorn it with intelligence and refinement, it is as if you were to wear broadcloth and a silk hat to mill.

If you invest your money in fine clothes and do not wear them with dignity and ease, it is as if a plowman were to sit at a jeweler's table to make and adjust hair springs.

If you invest your money in strong drink, it is the same as turning hungry hogs into a growing corn field—ruin will follow in both cases.

If you invest your money in every new wonder that flaming circulars proclaim, it is the same as buying tickets at a lottery office where there are ten blanks to one prize.

If you invest your money in the "last novel," it is the same as employing a tailor's dandy to dig your potatoes.—*Valley Farmer.*

For the New England Farmer.

THOUGHTS SUGGESTED BY THE N. E. FARMER, SEPT., 1860.

Page 394.—*Colic in Horses.*—In this article, quoted from the *Farmer's Advocate*, there are two or three things partly stated, and partly implied, which are unquestionably erroneous, and quite likely to lead some of the readers thereof into a wrong, and perhaps a destructive course of treatment. First of all, it is implied that *all* cases of colic in the horse are of the same nature exactly, or produced in the same way; and secondly, it is partly stated and partly implied that *all* cases of colic may, or should be treated in the same way. Now, it seems to require but a very little knowledge or even common sense, as to such complaints, to make one well assured that neither of these opinions or medical dogmas is either sound or reliable. Then, too, almost every one who has much experience with horses has met with positive facts which are utterly at variance with these dogmas or opinions. Every such person has found that some horses are much more liable to colic, than others which have been fed and treated in exactly the same way. In such animals, there must be weakness or disease of the stomach, or other digestive organs, which creates, or constitutes a predisposition to colicy attacks; and such attacks, when they do occur, ought to be considered and treated as much more dependent on some disease or debility of the digestive organs, than on the nature of the food or drink given to these animals, or than on the mode in which they may have been driven or managed. Such cases, and some others which might be named, if treated with discrimination, or good judgment, will be treated differently from those more common cases in which the attack of colic is produced wholly by the irritating or indigestible nature of the food or drink which may have been administered. But, unfortunately, such discrimination is but rarely to be met with, and it is because it would contribute to save animals from much unnecessary suffering, and their owners from occasional losses of valuable animals, that we have thought it worth while to point out these two errors of the undiscriminating, and to endeavor to leave the impression on the readers of this, that, to treat any disease correctly, intelligently, or successfully, the producing cause or causes should always be ascertained, if possible, and the mode of treatment be modified by and adapted to the peculiarities of the producing cause.

Leaving these remarks of a general nature, as germs of thought, to be developed and applied by those qualified or habituated to such intellectual operations, we will draw our observations to a close by one remark of a particular nature. For the reasons already specified, and for others which seem not above the comprehension of plain common sense, the mode of treatment recommended in the article under notice, cannot, by men of sense, and should not by any one, be accepted as applicable or likely to be useful in all cases. In fact, there can be but a few cases of colic which are exactly like the one mentioned in the article under notice, and of course but a few in which the like treatment would be applicable. Few horses have that amount of fever accompanying colic, which would make a wet bed-comforter steam like

a pot boiling, as is said of that applied to the horse under notice. For a horse having such an amount of fever and heat on the surface as to cause such steaming, a wet blanket might be, at least, a safe application; but in a large number of cases there is no fever, and no increase of heat on the surface at all, and in many cases, a tendency to chilliness and withdrawal of the blood and natural heat from the surface, and in all such cases, both common sense and experience testify that wet applications only increase the evil, or run the risk of it, and are, therefore, neither safe nor salutary.

Suppose a case such as we had during a wet summer. One horse slabbered so excessively as to make several streams on the stable floor every night. During this time of slabbering, the horse had two or more slight attacks of colic, and at last a very severe one. The cause in this case was obviously the flashy, watery condition of the pasture, and imperfect digestion from the loss of so much saliva, with depression of all the vital energies. Now, in such a case, would a man of any sense apply a wet blanket, or would he not rather try to relieve the colic of a horse in such circumstances, by giving a drench containing caraway seeds, ginger, and perhaps other stimulating condiments? We leave the reader to decide for himself. If he is not given to riding hydropathic or other hobbies, we should be glad to have his views upon the treatment of colic in such a case as we have briefly reported. In that case, half a teacupful of caraway seeds bruised, and given in a strongly spiced tea of ginger, allspice and pepper, and repeated in from five to ten minutes, was soon followed by entire cessations of the colicy attack, which was a most severe one.

Page 406.—*Superphosphate for Turnips.*—There are advantages, we have no doubt, to be derived from reporting cases of failure, when some particular manure, mode of management, new plant, or new implement, has been experimented with fairly and judiciously, and in such a way as to render the results reliable, and of value for either scientific, or practical purposes. But are there not disadvantages also? There are, at least, dangers of disadvantage, if not carefully guarded against, as is evident from this report by Mr. M. PRATT. The reader is left without any means of determining, with certainty, to what cause the reported failure was chiefly owing, whether to Coe's superphosphate, or to superphosphates of whatever kind, or to the dryness of the season, or to something else; being thus left uncertain as to the cause of the failure in the crop, he is, of course, unable to decide what he must do, or avoid doing in order to escape a similiar failure. And not only is the reader left in the dark as to what he must avoid if he would escape a similiar failure, but he is left exposed to the danger of making two inferences which might be of disadvantage or damage to himself, or Mr. COE. If the reader should suppose the failure owing to the particular superphosphate used, he might thus have fallen into an injurious mistake; and if he should infer that superphosphates generally are not suitable for the turnip crop, that would also be a great mistake, and one which might be of disadvantage to himself, if it should prevent him from availing himself of the aid of superphosphates, and other phosphates of lime, in raising turnip crops. A reader not acquainted with the abundant testimony furnished by English turnip-growers to the great value of the various phosphates of lime in the culture of that crop, might possibly come to the conclusion that Mr. PRATT'S failure was owing to the use of the superphosphate, and that superphosphates were not a suitable fertilizer for a turnip crop. This would be a great mistake, and might be of great disadvantage to any one who adopted it, for it is well known to those acquainted with British agriculture, that phosphate of lime, either in the form of bone meal, or of a genuine superphosphate is almost universally used in the culture of turnips, and that it always, (that is, with scarcely an exception,) causes an increase of several tons of bulbs per acre over and above what can be raised on the same soil in the same circumstances without phosphates in some form.

As Mr. PRATT, we are sure, knows all about the special adaptation of phosphates for increasing the acreable yield of turnips, he could not mean to lead his readers into doubt in regard to this well established fact or truth, merely because of a failure in a single crop, and that in a very dry season. But it may be better, now that we have indicated some of the suppositions or guesses as to his meaning which readers may make, to leave Mr. PRATT to make his meaning less liable to misinterpretation, if he should think it of any importance so to do. MORE ANON.

P. S.—If Mr. PRATT or any one else could tell us how to detect fraudulent bone dust and superphosphates, he would confer a real benefit on many of his brother-farmers. Prof. S. W. JOHNSON'S report is good, but not enough for this purpose.

PULVERIZING THE SOIL.

The effects of pulverizing or stirring the soil are numerous.

1. It gives free scope to the roots of vegetables, and they become more fibrous in a loose than in a hard soil, by which the mouths or pores become more numerous, and such food as is in the soil has a better chance of being sought after and taken up by them.

2. It admits the atmospheric air to the spongioles of the roots—without which no plant can make a healthy growth.

3. It increases the capillary attraction or sponge-like property of soils, by which their humidity is rendered more uniform: and in a hot season it increases the deposit of dew, and admits it to the roots.

4. It increases the temperature of the soil in the spring, by admitting the warm air and tepid rain.

5. It increases the supply of organic food. The atmosphere contains carbonic acid, ammonia and nitric acid—all most powerful fertilizers and solvents. A loose soil attracts and condenses them. Rain and dew, also, contain them. And when these fertilizing gases are carried into the soil by rain-water, they are absorbed and retained by the soil for the use of plants. On the other hand, if the soil is hard, the water runs off the surface, and instead of leaving these gases in the soil, carries off some of the best portions of the soil with it. Thus, what might be a benefit becomes an injury.

6. By means of pulverization, a portion of the atmospheric air is buried in the soil, and it is supposed that ammonia and nitric acid are formed by mutual decomposition of this air and the moisture of the soil, heat also being evolved by the changes.

7. Pulverization of the surface of soils serves to retain the moisture in the subsoil, and to prevent it from being penetrated by heat from a warmer as well as from radiating its heat to a colder atmosphere than itself. These effects are produced by the porosity of the pulverized stratum, which acts as a mulch, especially on heavy soils.

8. Pulverization, also, as the combined effect of several of the preceding causes, accelerates the decomposition of the organic matter in the soil, and the disintegration of the mineral matter; and thus prepares the inert matter of the soil for assimilation by the plants.—*Gen. Farmer.*

WHAT IT AMOUNTS TO.

Various journals are engaged in the difficult task of estimating the amount and value of the wheat crop of the country, which is now all harvested. However different the estimates may be, it is generally conceded that the wheat crop of this country has been a large one, and that there will be a considerable overplus for exportation to meet the demand now made for it in Europe. Taking 1858–59 as the basis of a calculation, and the wheat crop is assumed to be equal to 229,000,000 bushels against 201,000,000 in 1859, and 159,000,000 in 1858. The production by States is given as follows: Pennsylvania, 25,000,000 bushels; New York, 25,000,000; Virginia and North Carolina, 18,000,000; Kentucky, 9,000,000; Ohio, 28,000,000; Indiana, 19,000,000; Illinois, 25,000,000; other States, 80,000,000. The surplus is estimated at 61,000,000. In addition to this, it is supposed that from one-sixth to one-fifth of the surplus crop of last year is yet in the hands of producers, giving a total surplus for export of 67,000,000 bushels. The crop in Wisconsin, which, in the foregoing figures is put down at 16,000,000 bushels, is reported to be fully 30,000,000. This, doubtless, is somewhat exaggerated, but the abundance of the crop may be inferred from the fact that men, women and children, doctors, lawyers and ministers were in the fields harvesting, and that the work was even performed by moonlight. Taking all the crops of the country, it is thought to be within bounds to put the value of our staples this year at two thousand millions of dollars, or about sixty-six dollars for each person.—*Philadelphia Ledger.*

Barrels for Fruit.—Everything in contact with fruit should be clean and sweet, and the vessel in which it is placed should be dry and tight. Old flour barrels should not be used, unless well washed and dried, as the particles of flour left in the barrel will mould and impart to the fruit an unpleasant odor and flavor. Old lime barrels, it is said, are excellent for this purpose—the lime absorbing the vapor and gases. If this is so, a little fresh slaked lime scattered on the bottom, sides and top of the barrel, would be beneficial. —*Genesee Farmer.*

A HARVEST SONG.

The toil of day is ended,
The night is at her noon,
And the harvest song swells blithely up
Beneath the harvest moon;
Then tread a quicker measure,
And chant a louder strain;
With a dance and song, the days prolong,
That bring the golden grain.

From out the distant mountain
Comes the voice of the cascade,
And the nearer gleam of its silver stream
Makes glad the silent glade;
Through all the shadowy forest
Is heard the fall of leaves—
And the timid hare treads stealthily
Among the nodding sheaves.

And now, on every hillside,
The purple vintage glows;
As when a deeper radiance falls
From daylight at its close;
No time is it for sadness,
Despondency or fear,
When autumn comes in gladness,
To crown the fruitful year.

Dear is the pleasant leaf-time,
When all is soft around—
When frost-imprisoned rivulets
Are melting into sound.
And dear, too, is the season
When spring and summer meet;
When the woods are faint with odors,
And the hills are dim with heat.

But spring is but for pastime,
And summer but for show;
While autumn, like a crowned king,
Has riches to bestow;
So he shall be the monarch
Of all the shining year,
And a crown shall wear, and a sceptre bear,
Of fruits, and the golden ear.

PRIZES FOR AGRICULTURAL REPORTS.

With the view of inducing the officers of Agricultural Societies to collect and embody in their annual reports more information of a character which will be valuable and interesting, than has heretofore been the case, the Board of Agriculture of Upper Canada have offered four premiums, amounting to $75 dollars, for the four best County Agricultural Society Reports; and four premiums, amounting to $50, for the four best Township Society Reports.

We consider this an excellent movement. Some societies in New England publish in the beginning of the year a pamphlet of premiums to be paid at the Fall Exhibition, with a glowing account of arrangements for plowing, drawing and trotting matches, the name of some far-brought orator, with many other specifications of the attractions of the promised jubilee, but for want of funds, or other reasons, make no other statement of their year's proceedings and doings than an imperfect newspaper report. Others publish in pamphlet form a bare statement, sometimes with and sometimes without the Address, of the award

of premiums. In our opinion there is little practical good resulting from such management. The mere fact that 90 bushels of corn, a big ox, a grand cow for milk, a large pumpkin, or any other vegetable, animal or implement, were exhibited and took premiums on a certain day, is very unsatisfactory to most minds. They wish to know not only what the best farmers produce, but how they do it.

For such information our Canadian neighbors offer handsome premiums; and we hope the managers of our own societies will continue their efforts to give to their yearly transactions greater practical value.

For the New England Farmer.

A FARMER'S DAUGHTER ON FARMING.

MR. BROWN:—I have had the pleasure to-night of reading the able production of your friend "Anna," entitled "Farmers' Wives and Daughters." My youth and insufficient education might present a reasonable barrier to discussion, yet permit me, through your gallantry, to break silence for once, even at the expense of exposure. Anna says, she may safely say, that, "it is not a well established fact that farmers' wives are the most hard-working class in existence." This is contradiction, and in good humor I beg leave to return the same compliment. There are exceptions, to be sure, and 'tis possible I am not prepared to judge of farming in Massachusetts, but I *am* prepared to judge of farming in New Hampshire.

She asks,—"Is there not as much intelligence and refinement in a farmer's family, as in a mechanic's?"

Naturally, there is, but if farming is so very profitable as some of the *Farmer* correspondents contend it is, it would afford the means of presenting to the world a class of people paramount in the cultivation of intellect to that of mechanics. If a larger proportion of our present teachers are from farmers' families, it is only in the country, and there a larger proportion of the inhabitants are farmers, a fact which shows they are not elevated above toil, (as they surely ought not to be,) but are compelled to depend upon their own resources, while their mother or sister is obliged to preside in the kitchen.

If any courageous girl *can* acquire a good education independent of public institutions, there are few who can unlock the deep mysteries of science in solitude, and without the aid of teachers. The rudiments of science, necessary though they be, are not sufficient for a gifted mind. No, we want woman educated, thoroughly educated, in all that can enlighten and eternalize the mighty mind.

Committing Latin lessons while "turning a churn crank or frying pancakes," seems to me a difficult and dry task, and I should prefer to make the butter and pancakes at one time, and have the profits of the farm augment father's purse enough to secure assistance while I learned my Latin lesson at another time. Suppose there is "less real poverty among farmers than among mechanics;" all the world are not mechanics, and how many men of wealth are there among farmers who have acquired affluence by simply farming? No person of ordinary abilities, with health, need suffer in this age for the necessities of life, let him be in whatever occupation he may.

The question in regard to the young lady mentioned was not asked, Mr. Editor, expecting you to decide her fate, for she is one who decides her own fate, and has already done so by very recently marrying, neither a farmer nor a fourth-rate lawyer. The question was asked, as Young America said, "To see what you would say," regarding your opinion of consequence, of course.

My friend seems of the opinion that we should be content without pictures upon the walls. If we can be, that is well, but I think she cannot deny but what pictures are useful, and render a home pleasant. Visit the palaces of the Old World, its picture galleries, its long corridors ornamented with paintings, the productions of the richest genius, and one cannot but be awed in admiration. Visit them in imagination, if no more, and you cannot fail to admire. But in our homes, the sacred centre of our affections, there place the works of art. Irving says: in America, literature and the elegant arts must grow up side by side with the coarser plants of daily necessity. For instance, suspend upon your wall Christ on the Cross, and think you not, that fair-haired boy will discern a living reality which cannot be painted in words? Yes, as the Son of man, with agonized features, looks upon him so beseechingly, it *must* penetrate his little heart, and with flowing tears and generous sympathy, it will plant a principle to blossom in manhood.

My Massachusetts sister has a view from her window, "such as no human artists could form." True, and I have a view from my window, too. Below, the Mascoma valley, lovely in the extreme, sprinkled with thriving villages, giving evidence that here are intelligent mechanics and merchants as well as farmers. Beyond, lie the Mascoma and Crystal lakes, their polished surfaces a mirror of Heaven's own beauty; while all around in their terrible grandeur and sublimity, rise the eternal hills and mountains from the Green, the boast of Vermont, to Mount Washington, the pride of the old Granite State. 'Tis a picturesque scenery, glorious to behold, beautiful beyond expression. And I want time to admire its loveliness, time to forget the world, and care, and profit, in the dreamland of nature. Does a farmer's wife possess this time? The daughter may—but does the mother?

In summer, we boast of all that is beautiful in the "Switzerland of America." In winter, though we miss the multitudes, music, and the drama, yet there is a magic in the huge snow drifts that gather about our doors, a romance in the impenetrable fort which old Boreas stations between us and our next neighbor. Often, too, when favored with a north-easter, the subsequent sunshine is duly appreciated, and as the naked trees are mantled in their transparent verdure of ice, and they dance and glitter and tremble in the sunlight and breeze, it seems as if the sepulchre of the seasons proclaims both great and living truths infinitely real. Indeed, Anna made a great mistake when she thought we found not sunshine in rural life, for there is sunshine in any spot when not overtasked with *care*. If she will visit me in my mountain home I will assure her I can romp with her as well as any farmer's daughter, climb stone

walls, ride a spirited pony, manufacture all the music she wishes on the wash-board or old-fashioned spinning-wheel, or anything else outside of the piano. These are characteristics of the farmer's daughter.

I regret to have shocked the mirthful sensibilities of my friend by "striking so mournful a strain," but am glad she comes forth in so lively a style. Contrast is bewitching oftentimes, and calls out a true view of the reality. Let us look at farming as it is. It is, *ipso facto*, a *pleasant* occupation, laborious, independent, and honest. The farmer can say *honi soit qui mal y pense*, for he himself need think no evil. But profitable enough to secure wealth unconnected with other business, I think it is not. He who is blest with strong muscles and a contempt for the scrabbling, money-making world, is best adapted to this occupation. POLLY.

Enfield Centre, N. H., 1860.

For the New England Farmer.

WINTER AND SPRING WHEAT.

MR. EDITOR:—I am most happy to hear of another wheat-grower, R. H. Simmons, Esq., of Hartford, Vt. His success with spring wheat presents a wonderful amount of encouragement to farmers. This is the right source and the kind of information so much needed by your yeomanry. It is to be hoped the columns of your well directed paper will teem with it, and that many farmers even less fortunate than Mr. S. will also give an account of their stewardship.

But I must say a word in defence of winter in preference to spring wheat, fearing your correspondent, Mr. S., has not made a fair trial. He thinks "twenty-five per cent." more of spring wheat can be raised to the acre than of winter wheat, in the region where he resides. Of this I have my doubts, unless some new varieties have come to hand with which I am not familiar. My experience covered the years from 1845 to 1851. On strong land where I got good winter grain the spring would rust and mildew, and could not survive the dog-days without damage. Year after year the same fatality pervaded Massachusetts. Occasionally a farmer would succeed. He felt no confidence.

All the poor, dark flour comes from spring wheat, the best and whitest from winter—this I think is proverbially true. Now, if Mr. S. will try another year to get his wheat in the 25th of August, two to three inches deep, so as to give it root to guard against winter-kill, taking the same pains as with his spring crop, he will doubtless get as heavy a yield, and grain of far better quality. It matures two to three weeks earlier, and is likely to escape the hazards of dog-days.

As a matter of prudence, every farmer among you should have his spring and winter patch. If he fails in one, he may secure the other; one year gives him this double advantage for a crop. Providence has made wonderful provision for the farmer, most surely—now will he reject or accept the terms? Bread is the home question.

Brooklyn, L. I., Sept. 10. H. POOR.

P. S. The crop of Mr. Simmons, 217 bushels from 7 acres, is equal to 54 bbls. of flour in value for the farmer.

EXTRACTS AND REPLIES.

WILD TURNIP.

I wish to inquire through the *Farmer* how wild turnips can be eradicaeed from a field? If it cannot be done, how much will they lessen the value per acre? Will they do any damage while the field is in grass?

Indian Orchard, Sept. 20. C. W.

REMARKS.—Go through the field as often as you find any in blossom, and pull it out by the roots. This is our practice, and it succeeds. The wild turnip is a robber, always injurious to the crops, and ought not to be allowed among them.

TOMATO KETCHUP.

I like your paper—in fact, I prefer a farmer's paper, at any time, before a trashy story paper, so I buy the *Farmer;* couldn't keep house without it—although not a farmer—hope I shall be one before many years. But what I want now is, to have you tell me or find some correspondent to, how to make tomato ketchup. It is no use to see my own tomatoes rot in the yard and buy my ketchup. I can make a kind that won't keep, but I want to find out how to make a good kind that *will* keep. A MECHANIC.

Cambridge, 1860.

REMARKS.—We gave two recipes, which our women folks pronounce good, in last week's paper.

A GOOD YIELD OF BARLEY.

My father raised this year, from one acre of land, forty-one and a half bushels of barley. The land is a strong, deep loam, and after a thorough and careful cultivation for three years, the above crop was realized.

W. H. SAVAGE.

REMARKS.—We are glad to learn that the barley crop is receiving more attention than it formerly had. We think it worth more, per bushel, for several uses than corn meal. Nothing equals it when ground into meal, for feeding to calves that are being reared by hand. So it is excellent for hogs, sheep and hens. The flour, also, makes excellent bread.

SOIL FOR PEAR TREES.

I have about an acre of ground on the south-east bank of a river, where I wish to plant pear trees. Will you, or some of your correspondents, inform me how the soil should be prepared? Also, where trees can be obtained of the best variety. B. SAUNDERS.

Nashua, N. H., 1860.

REMARKS.—Drain the soil in the first place, if it is wet; then trench it, or at least spade it a foot deep, manure and pulverize well, and set the trees. Stir the surface frequently, and never allow a weed to grow. Cultivate corn or garden stuff among them, but manure liberally every year.

RAPID DECAY OF SHINGLES.

There is much complaint at the present day that shingles decay very soon when placed upon the roof. Will you, or some of your readers, inform us through your columns whether subjecting them to a high temperature of heat before laid, say as high as the temperature of a baker's oven when they bake biscuit, or perhaps higher, will prevent their decaying so soon, and give them more durability when made use of? If so, it will be of great use to the community at large.

Derry, Sept. 18, 1860. A SUBSCRIBER.

REMARKS.—We have had no experience in the matter. Would not soaking them in a solution of the sulphate of zinc make them very durable? That will preserve posts set in the ground for a long time.

IMPROVEMENT OF SHEEP FOR WOOL.

In answer to Mr. Doane I would advise him to cross with full blood Spanish merino, and let the buck to the sheep as early as the first of November.

Harrisville, N. H., Sept. 12, 1860. C. BARKER.

For the New England Farmer.

SWAMPS AND MEADOWS.

Although the "theme of my discourse" may seem an uninteresting one to some who may glance at the heading of this article, yet if there are

"Sermons in stones,
Books in running brooks, and good in everything,"

why is it not possible to derive a little benefit from an investigation, however slight, of old swamps and bog meadows. Certainly great good is already being realized from these natural reservoirs of fertility, in the form of muck for the compost heap, and peat for fuel.

As the soil of New England is comparatively poor and unproductive, unless much skilful labor is expended upon it, the all-wise Creator has, without doubt, formed these rich deposits of vegetable matter to supply in part, if man will but make use of it, this want of fertility. Future generations will appreciate much better than the present one does, the inestimable value, to the farmer, of these lands, which were once considered almost worthless. But aside from their material value, I wish to speak more particularly of these places as subjects for curiosity and geological research.

Innumerable swamps and muck meadows are scattered throughout New England. Some are situated upon the margins of ponds, lakes and rivers, others, frequently of large extent, have only a small brook running through them; and others of smaller area are entirely surrounded by unbroken ranges of hills, having no visible outlet or inlet. Those which border upon the shores of the Atlantic, are denominated salt marshes, and doubtless, differ somewhat in their formation from those lying inland, but I have never had an opportunity to examine them particularly.

Adjoining the farm where I reside, and partly upon it, there is a swamp containing about fifty acres. It has a brook running through it, which is fed by springs around the margin of the swamp, and empties into a pond near by. The swamp is covered by a growth of white, and pitch pine, American larch or tamerack, maple, spruce, and white birch. Some of the trees are more than a foot in diameter. There is a tradition that a hundred and fifty, or two hundred years ago, this swamp was a smooth meadow, covered with grass, which was all cut for fodder, as good English hay, in those times, was very scarce, so far back into the wilderness as Groton, (if it had, at that time, an English name,) was then considered to be.

While digging muck in this swamp, I have made some discoveries, which, although not so curious and important as some geologists have made, yet, perhaps, are worthy of mention. At different depths, varying from one to five feet, I have found stumps of pine and larch in the position in which they grew. Some of these stumps must have been nearly two feet in diameter; and I have frequently found one large stump directly above another, with marks of fire upon their bark and roots. There were, also, and generally below the stumps, the remains of the leaves and stalks of flags. Sometimes the trunk of a large tree would be found lying across the line of the ditch, with its heart quite hard and sound.

From these facts, I should conclude that a long time ago, the swamp was several feet lower than at present, and that it was sometimes covered with flags and grass, and sometimes with trees of a much larger growth than those which are now growing upon it, and, from finding bits of coal, charred stumps, &c., that it has several times been burned over. There seems to be an accumulation of water under this bed of muck and peat, for after the ditch has been dug to the depth of five or six feet, the bottom will very frequently rise up, and bursting open, the water will rush through, and fill the ditch in a few minutes.

There is a deep basin, or "bog-hole," near this swamp, called the "punch bowl," from its resemblance in form to that bowl which is so alluring and fatal to many. It is about fifteen rods in diameter, and entirely surrounded by a ridge of gravelly hills, or, as the geologist would probably say, altered drift, or œsars, which vary in height, from twenty-five to forty feet. This basin is filled to an unknown depth, with the usual deposit of muck, and its surface, except a small, open space nearly in its centre, is covered by a growth of moss, bushes and trees, of the same kinds that grow upon the swamp, except that there is no pine. About twelve years since, the open space in its centre was covered with water, and a pokerish looking place it was, too, at certain times. Standing upon the rim of the "bowl," in a sunshiny day, the beholder could see, that what appeared to be the bottom of the miniature lake, was of a light green color, with the exception of two jet black holes of a circular form, and eight or ten feet in diameter. When I was a boy, the sight of these—to me, unfathomable holes—would almost make me shudder.

But the march of improvement has altered the face and stomach (if the expression is allowable,) of this ugly bog very much, for I have this year picked several bushels of cranberries over those same holes of which I had such a dread in boyhood. But the thin covering of cranberry roots and vines is a very shaky concern, (like some *political* platforms of the present day,) and at first, I was somewhat afraid that, after all, one of these horrid openings would swallow me up in its black abyss. The cause of this great change lies in the simple fact that a railroad has been built almost directly through the middle of the "bowl." An outlet has thus been made for its stagnant waters, and the gravel, of which an immense amount was dumped into it, has pressed the muck more compactly together, making the surface a little higher and dryer; and the cranberry vines have spontaneously spread themselves over the open space left by the waters.

In my explorations in muck beds, I have not yet discovered an elephant, but it is possible that I may, for it is only a few years since that the remains of one were found in Vermont, beneath a deep bed of muck. In the same part of New England, the skeleton of a small whale has also been found imbedded in the blue clay, a deposit made long before the vegetable deposit commenced.

It would be interesting to know the length of time which has elapsed since these swamps and meadows began to form, but that is a point which is—like many others in the world's history—very difficult to decide upon. Many thousands, and perhaps millions of years ago, according to geol-

ogy, these valleys and hollows, now filled with decayed vegetable matter, were submerged by the waters of the ocean. It is thought by eminent geologists, that, at a very remote period in the earth's history, the level of the sea on the coasts of America was more than fifteen hundred feet higher than it is at the present time!

This continent must then have consisted of only a few large islands. At another, the drift period, the ocean was several hundred feet lower than its present level. At still another, the pleistocene period, the sea remained for a long time four hundred feet above its present bounds, and has gradually been receding from the land, or the land emerging from the ocean, until the present time. During the period last mentioned, New England and New Brunswick constituted a large island. This was separated from the main land of New York by a strait, which extended from the valley of the St. Lawrence, through the valley of Lake Champlain, of the Champlain Canal, and of the Hudson River. The summit level of the canal indicates the most shallow part of this strait, which had a depth of about 125 feet. The western part of Vermont was thickly studded with small islands in a tranquil sound. The exterior portions of the New England States, and extensive districts in the middle States, constituted a beautiful archipelago of small and picturesque islands."

Perhaps it was during this period, that in old Massachusetts, reptiles of the frog kind attained the respectable size of an ox; and biped toads outgrew the elephant! Many of the rounded hills, gravelly ridges and bowl-shaped cavities of New England are doubtless the effects of marine agency.

As the land slowly emerged from the ocean, the valleys and hollows which had no outlet, and were not fed by springs, were left full of water, which evaporated after a time, leaving more or less rich alluvial matter, upon which a luxuriant vegetation soon began to grow, and with its decay, the muck and peat formation commenced. In those valleys which had an outlet, the muck deposit doubtless commenced in the same manner, but probably a little sooner. Ponds, fed by springs, or brooks, are, in many instances, being encroached upon by the swamps and marshes around their margins; and, ages hence, if the process goes on, will be entirely filled up.

The muck and peat formation has evidently been going on during many thousands of years, the surface gradually rising and gaining upon the upland, but where the end will be, is hidden in the unknown future. Those swamps which are thickly covered by a growth of moss, bushes and trees, must of course gain much faster than smooth meadows which annually yield a crop of hay.

I cannot close without referring to the beautiful appearance which these swamps present to the eye during the month of September. While I am writing, the swamp I have described, is decked with a robe of brighter hues, if possible, than those of the rainbow. Some of the maples are bright scarlet, others are crimson and purple, and some are golden yellow. The larches are brownish yellow. These bright colors, with all their different shades and combinations, form a beautiful contrast with the dark green spruce and the lighter shades of the larches and pines. From the hills surrounding this swamp, one can behold a scene surpassing in beauty the most exquisite piece of Mosaic work. The green upland woods form a picturesque background to this garden of nature. Passing through New England at this season of the year, the traveller will behold hundreds of these magnificent views. In October, the foliage of the upland forests is also changed, as if by magic, to the same gorgeous tints, and then the whole landscape presents a scene of resplendent beauty. S. L. WHITE.

Groton, Sept. 25, 1860.

THE OLD YANKEE FARMER.

[A homely old ballad, brought to mind by the coming anniversary of the County Fair.]

Here's health to the Farmer who lives on the land,
Made the best and the richest on earth by his hand:
You may search the wide earth, but there's naught to be seen
That can rival the true Yankee Farmer, I ween.

What life is so happy? He's up with the sun—
He hears the day's poetry sweetly begun
By the lark and the cuckoo, the swallow and merle,
And sees the green lawn all bespangled with pearl!

While sluggards in cities, 'mid tumult and strife,
Lose all the best part of this quick fading life,
He quaffs Hebe's cup at Aurora's first ray,
And lives twice as long as they do every day!

He rules every station, from castle to cot;
He's neither by noble nor peasant forgot;
The peer and the plowman together agree
That the farmer should never want company.

Look round you—what treasures his riches unfold!
His granaries filled with those sheaves of bright gold!
His pens and his pastures all breathing with life,
And his home far away from all passion and strife!

Then, a health to the Farmer who lives on the land
Made the best and the richest on earth by his hand:
You may roam the wide world, but there's naught to be seen
That can rival the true Yankee Farmer, I ween!

For the New England Farmer.

CULTURE OF CABBAGES.

Although bred a farmer, and taking a deep interest in everything which relates to farming, practical, or theoretical, I have yet to acknowledge that I am one of the unfortunates who do not possess a farm. A single half acre of land is all I have on which to expend my little wealth of sinews and manure. And even on this small pittance of space, I have not always been successful with my crops. For instance, I consider a garden without cabbages as a thing far more out of love with propriety than "a church without a bishop," or a Nessus without a shirt. And yet my land having been many years under cultivation, like other "old land" (as it is technically termed) has obstinately refused, until the present season, to grow cabbages. In 1859 I sat out three dozen plants, and not one of them "came to a head." All were afflicted with "club feet," wilted away and died. Having seen a notice in the *Farmer*, a year or two since, that unleached wood ashes, placed in the hill, and directly in contact with the plant at the time of setting it out, had proved a remedy against the disease here indicated, I was induced last spring to try the experiment. I placed about half a pint of good wood ashes in each hill, mingling a portion with the soil, but

taking care to let the ashes, nearly pure, come in contact with the roots of the plants. The experiment, I am happy to say, has proved entirely successful. Every one of the plants has grown to a thrifty cabbage, and not one has exhibited any indications of disease.

If such is the effect of wood ashes upon one plant, why not upon others? The "club foot" is undoubtedly caused by an insect which bites the root of the plant; and if thus rendered "innoxious," why cannot the grub that destroys the cucumber, the marrow squash, and other vines, be disposed of in the same way? I think the increased growth of plants treated in this way, will amply repay the cost of experimenting; for my garden, in its palmiest days, never produced handsomer cabbages than those of the present season's growth. E. C. P.

Somerville.

MECHANICS' FAIR.

A DAY AMONG THE AGRICULTURAL IMPLEMENTS AND MACHINERY.

So far as we have been able to judge by several visits to the ninth exhibition of the Massachusetts Charitable Mechanic Association, and by a cursory examination of the articles generally, and a careful inspection of those belonging to the *agricultural* department, we came to the conclusion that no previous exhibition has equalled this in regard to the number of articles presented, or in the ingenuity of new inventions, or in the style and excellence of their construction.

In the section appropriated to agriculture, we found some one hundred articles devised and constructed for the special use of the farmer, and they comprised many of the most useful labor-saving implements used upon the farm and in the farm-house, and many of the specimens of machinery that are happily influencing the industry and prosperity of the country.

The observing person cannot have failed to notice how much the farmer has been aided by the introduction of improved implements and machinery in the prosecution of his labors,—and taking the broad fields of the west into the account, it is not extravagant to say that those labors have produced more than double what they ever have before, through their agency. "Plows turn up the soil deeper, more evenly and perfectly, and with greater ease of draught; hoes and spades have become lighter and more efficient; grain, instead of being beaten out by the slow and laborious process of the flail, is now showered in torrents from the thrashing machine; horse-rakes accomplish singly the work of many men using the old hand rake; twelve to twenty acres of ripe grain are neatly cut in one day with a two-horse reaper;" the large hand or "loafer-rake," light and cheap seed-sowers—wheat hoes and weeders with which one man can perform in the same time as much service as can five men with a common hoe—mowing machines, hay-caps, grain cradles—lighter, and yet stronger and better, rakes, pitch-forks, manure-forks, fanning-mills, straw-cutters, root-slicers, pumps, and especially new implements for aiding in the process of draining lands—one of the most profitable operations of the farm, and now introduced as a system of the first importance—which reduce the cost of products nearly one-half from that required twenty years ago, are now common on most well-conducted farms. The balance, or fly-wheel, in equalizing the motion of machinery used by farmers, is annually saving a vast expenditure of human power, and that saving may fairly be carried to the credit side of their account.

As a farmer, we find pleasure in acknowledging our indebtedness to the genius of the mechanic in devising and constructing the improved implements and machinery which so greatly lessen our toil, facilitate our labors, and at the same time increase our profits. We believe in progress, and that it is better to balance the grain in the bag that is thrown across the back of the horse than to put a stone in one end of it; that it is better to lessen the friction of the drag by using wheels, and that these principles hold good in most of the tools and machines used on the farm. We believe that farming is the natural pursuit of man; that it is healthful, profitable and honorable, and that as its labors have been guided more by intelligence, and as improved means and modes of husbandry have been introduced, the farmer has assumed a higher rank, and has become more and more influential in every department of the business of men.

As these means and modes have progressed, they have furnished the farmer with the ability to surround his home with the comforts and elegancies of life. When, fatigued with the labors of the day, he returns to his home and family, he no longer sits upon the hard, awkward, old-fashioned white pine "settle," or upon bare floors, in uncomfortable, straight-backed chairs which scarcely relieve the pressure of out-door toil. Instead of this he finds chairs, sofas or lounges fitted to receive the weary form and restore it to a vigorous condition. His floors are covered with cheap and substantial carpets, economical in a money point of view, and yet comfortable if not luxurious. The glare of rooms is softened by blinds, while a world of woman work is avoided by the occasional coats of paint which their woodwork receives. His cooking-stove saves him ten cords of wood annually, while his food is better prepared, and with less labor, than under the open fire-place processes. He has a carriage, too, of modern construction, to ride to town-meeting, or to church on Sunday, and really is a stronger and better citizen in possessing these things, and

for the fifty dollars which he has in his pocket when voting on town-meeting day for a member of the General Court, or for a President of the United States!

These improvements are mainly effected through a knowledge of mechanical principles, and no association, in our opinion, seems so well calculated as this of which we are speaking, to increase that knowledge, and to produce results that will avert or ameliorate human toil, and ennoble and dignify mankind.

It has been estimated by Mr. J. J. Thomas, the careful writer whom we have already quoted, that "the capital for furnishing the farms in the Union with implements and machinery in the best manner would amount to five hundred millions of dollars, (500,000,000,) and as much more is estimated to be yearly paid for the labor of men and horses throughout the country at large. To increase the effective force of labor only one-fifth would, therefore, add annually one hundred millions of dollars, ($100,000,000,) in the aggregate to the profits of farming."

The axiom of Lord Bacon, that "Knowledge is Power," is not more applicable to any department of human industry, than it is to that part of the late Exhibition which relates to farm implements and machinery; for so long as Agriculture underlies all other Arts, and affords the basis of all enterprise and profit, so long will an increased knowledge of its wants have a direct influence upon the wealth and prosperity of the nation.

The Ninth Exhibition is an honor to the Association, to the inventors and manufacturers of the articles exhibited, and reflects credit upon the taste, intelligence and progress of the people who have sustained it.

BARN ITCH.—This disorder is a troublesome and unsightly difficulty, and one which is very liable to run through a herd of cattle to the serious detriment of the appearance of the stock. The remedy is a very simple one, and, as we are informed by Paoli Lathrop, Esq., of Hadley Falls, Mass., a very efficacious one. Take a cob and rub the affected part until the surface is smooth, and then apply grease as an emollient. The same remedy is always efficient for the scratches in horses, unless the disease proceeds from some general disorder in the system of the animal, in which case other and more efficient means must be used.

NEUTRALIZING POISON.—A poison of any conceivable description and degree of potency, which has been intentionally or accidentally swallowed, may be rendered almost instantly harmless by simply swallowing two gills of sweet oil. An individual with a strong constitution may take nearly twice the quantity. This oil will most positively neutralize every form of vegetable, animal or mineral poison with which physicians and chemists are acquainted.

For the New England Farmer.

NORFOLK AGRICULTURAL FAIR.

The Norfolk Agricultural Society held its twelfth annual Fair on Thursday and Friday last. As usual, the attendance was large, and the arrangements admirable. My impression of the fair, is that, as a whole, it did not sustain the reputation of the society so well as several fairs previously held. In some respects, however, I shall modify this remark, as I proceed. No premiums for cattle had been offered, in consequence of the general apprehension of the cattle disease, at the time when the list of premiums was arranged, and no cattle, therefore, were present to compete for them. Some fine animals, however, were here on exhibition, among which the Kerry stock and Shetland heifer, belonging to Arthur W. Austin, Esq., of West Roxbury, the Jamestown stock, owned chiefly in Dedham, and the Ayrshire bull, owned by E. W. Andrews, Esq., of West Roxbury, were particularly noticeable, and attracted much attention. For the general purposes of a farm, I am inclined to believe that no animals superior to the Ayrshire bull and the Jamestown progeny are to be found in the county. The other stock, belonging to Mr. Austin, is of recent importation, and its peculiar excellence remains to be proved. It indicates, thus far, great hardiness of constitution and peculiar adaptation to our climate and pasturage. It has a small and compact form, well set limbs, a soft, glossy hide and a golden skin. It is remarkably gentle and docile, feeds quietly, and yields rich milk in larger quantity than its size would authorize us to expect. I shall watch its progress with much interest, and may reasonably look, I think, for great benefit to the farmers of the county from the introduction of it into their vicinity.

The show of horses has never been equalled in the history of the society. I make this remark on the authority of qualified and experienced judges, my own knowledge in this department being extremely meagre. I could not but notice, however, that the celebrated Balrownie, belonging to Mr. Shaw, of West Roxbury, was the observed of all observers, and have no doubt that he merited the attention he received. Other fine animals, also, excited the admiration of skilful judges. In swine, the exhibitions of this society have formerly been particularly full and good. Only a few specimens were now presented, but these were of much excellence. Of poultry, ducks and geese, there was more than the usual display. Some golden pheasants, beautiful swans and foreign geese attracted universal attention.

In the house, the chief interest centered in the fruit. The apples, pears and grapes were unrivalled. Besides all the common varieties of apples, I noticed, for the first time here, some beautiful Newtown pippins, in the judgment of many, the very prince of apples. To those who know Norfolk county, it is hardly necessary to say that the pears and grapes were in great abundance, and of the finest quality.

The display of garden vegetables was good, but small. I was surprised at this, because the proximity to a good market and the almost uniformly high price of vegetables cause great quantities to be raised in this county, So of corn and potatoes, —the show was extremely limited. A few speci-

mens of great excellence were exhibited—but the farmers do not seem to have felt their usual interest in this, which is really the essential part of the Fair. I know that throughout the county the corn and potato fields were seldom more productive, and yet this department of agricultural produce was not largely represented. The farmers failed to do themselves justice. Several specimens of good spring wheat and one of oats were offered; but none of rye or barley—crops of which have been uncommonly large and fine.

Domestic bread was abundant and of great excellence. It will be a memorable and happy day for the farmers when their wives and daughters shall entirely discard salæratus and soda,—as the regulations of this society require, and supply their families with wholesome, and well-made bread. Butter, also, was more abundant than I have ever seen here before, and of equal excellence with that of any previous exhibition. I was particularly pleased to observe the department of agricultural implements, presenting many specimens of the best construction and greatest utility. Labor-saving machines for domestic use, and carriages, for travel and for work, were among the noticeable articles here.

In the department of fancy and needle work, in which the ladies of Norfolk have always excelled, there was much that attracted and merited attention.

An extensive and beautiful exhibition of the more commonly cultivated flowers graced a large table in the centre of the hall. Of rare flowers and hot-house plants, none were exhibited.

Like thousands of others, I was gratified by the Fair. Yet it was plain that the interest of the occasion depended too much on the exertions and contributions of a very limited number of persons, and that the great body of Norfolk farmers were not, as they should have been, represented by the productions of their farms. Many of the farmers were indeed there, but the evidences of their well-known knowledge and skill were absent. I regret this the more, because the fact is well established that the influence of this society upon the agriculture of the county has been eminently and extensively beneficial.

Of the merits of the address by G. S. HILLARD, Esq., of Boston, it would be superfluous to speak. Every one expected much, and I am sure that none could have been dissappointed. Similiar remarks are also applicable to the speeches of Judge MARSTON, the delegate of the Board of Agriculture, and of President FELTON, of Harvard University. Such distinguished scholars and orators can make no better use of their abilities and learning than thus to aid the all-essential art of agriculture.

OBSERVER.

KEEPING APPLES.—It is well known, says the *Working Farmer*, that apples keep longer after having parted with a portion of the water they contain. When first taken from the tree, if laid in a heap eighteen inches in depth, and covered with a light cloth, or a little straw, they will soon sweat; when this operation has succeeded fairly, the cover, or straw should be taken off, the windows opened, and the apples suffered to dry as suddenly as possible. By this operation they will lose five or six per cent. of weight, and if packed in barrels and shipped, arriving at their port of destination before a second sweating shall occur, they will be all sound, unless bruised in the packing or carriage. If dried immediately after the second sweating, instead of being left closely packed while damp, they are again prepared for a still longer voyage before decay will occur. Those who ship apples to Europe are well aware of these facts, and use the necessary preventive against decay.

GOSHEN CHEESE.

From an article on the manufacture of cheese, in the Ohio *Farmer*, we extract the following paragraphs on the celebrated Goshen cheese:

There are towns in rocky, bleak New England, realizing annually more profit from cheeses, whether estimated per acre, per cow, or per pound, than most western towns where the land is far handsomer and apparently more favorable every way for the service of a diary. We may take, for example, Berkshire county, Mass., and Litchfield county, Conn., which lie contiguous to each other, and belong to that broken, rocky, mountainous region, which extends northward to the valley of the St. Lawrence. We shall encounter facts like the following. The town of Goshen, in extent about nine miles by five, and not less than a third of this barren rock, or swamp, will exhibit an annual exportation of cheese ranging from a million and a quarter to a million and a half pounds. All this brings, in the best markets, from one to three cents per pound above the price of ordinary western cheese. It ought, however, to be said here, that Goshen being the favorite name in market, so far as this region of country is concerned, (and that probably through the influence of some enterprising cheese merchants of the last generation,) the cheese-makers who reside near the borders yet within the adjacent towns on every side, as Winchester, Torrington, Canaan, Cornwall and Norfolk, quite generally prefer to sell by way of Goshen, and in this way, of course, swell somewhat the gross amount which passes through the hands of the Goshen merchants, receiving their brand.

There are in this region a considerable number of manufacturers who keep few or no cows themselves, but buy the curds of the neighboring farmers. It is a curious fact, those farmers, or farmers' wives, (for the mistress of the house always "runs the curd,") who know how to get the greatest number of pounds of curd from a given number of quarts of milk, are also those who receive the highest price by the pound for their curds; that is to say, the greater the amount of curd that can be obtained from a given amount of milk, the better will be the curd or the quality of the cheese that is made from it. And this difference in amount, under the management of the various curd-makers, is considerable—enough to astonish those who have no actual acquaintance with the matter. It is said sometimes to equal a fourth of the whole amount.

Flavor—the great point in cheese-making—is here carefully attended to. The farmers, however, contend that there is something unusually delicious in the grasses of these mountainous counties of New England, from the Sound to the St. Lawrence; especially do they claim a freedom

from bitter and nauseous weeds in the pastures. But, after all, we believe that the delicacy of flavor in these New England cheeses is, for the greatest part, owing to the scrupulous neatness and nicety with which they are treated throughout the whole process of making, together with a precise, judicious and skilful, but indescribable seasoning of the curds. Perhaps we ought to add, as an indirect cause, that the largest and best cheese-makers have this for their whole business. They do almost nothing else. To this art and its process they devote the study of their lives.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 3.

FALCONS.

Fish Hawk, or Osprey—Jer Falcon—Wandering Falcon—Sparrow Hawk—Pigeon Hawk—Merlin.

With the celebrated OSPREY, or FISH HAWK, (*Pandion Carolinensis*, Bonap.; *P. haliœtus*, Sav.,) a bird so familiar to the inhabitants residing along our sea-coast and the shores of our lakes and larger rivers, will be concluded the history of the *Aquilinæ*, or Eagles. This truly majestic bird is so closely allied to the famed Osprey of the eastern continent *(Pandion haliœtus)* that it was formerly confounded with it, until the exact researches of C. L. Bonaparte, Prince of Musignano, showed them to be distinct, he distinguishing the present species as the American Fish Hawk, (*P. Carolinensis*, as above.) Though found in summer inhabiting from Hudson's Bay to Florida, it generally returns, according to Audubon, beyond the limits of the United States in winter; and its reappearance along our shores as spring opens is said to be hailed with pleasure by all, and particularly by the fishermen, as it indicates the return of those finny tribes that minister to the sustenance of both; and the noble character of this bird renders him offensive to none, while his graceful form and majestic flight, as well as his interesting habits, commend him to our regard. Wilson, who was a poet of no mean abilities, as well as a naturalist, thus finely describes its arrival:

"Soon as the sun, great ruler of the year,
Bends to our northern climes his bright career,
And from the caves of Ocean calls from sleep
The finny shoals, and myriads of the deep;
When freezing tempests back to Greenland ride,
And equal hours the day and night divide;
True to the season, o'er our sea-beat shore,
The sailing OSPREY high is seen to soar
With broad, unmoving wing; and, circling slow,
Marks each loose straggler in the deep below,
Sweeps down like lightning! plunges with a roar!
And bears his struggling victim to the shore."

The Fish Hawks are generally seen along our whole New England sea-coast in spring, a few breeding there, and along our larger rivers; they are frequently seen in this vicinity (Springfield, Mass.,) in April, and are probably common around the lakes of northern New England. Preying wholly upon fish, it never molests the property of the farmer; and differing from most of the rapacious birds in its somewhat social habits, is frequently seen in large companies. They often build in societies, three hundred nests containing young having been counted on a small island near the eastern point of Long Island, while Wilson speaks of seeing twenty in a distance of half a mile, and Audubon mentions of meeting with fifty in a day's excursion. The nest is a large structure, placed in trees, and composed of large sticks, mullein and corn-stalks, dry grass, &c., forming a mass, it is said, sufficient to fill a cart, and visible at half a mile's distance; and it is generally occupied for several years. The common Crow Blackbirds *(Quisculus versicolor)* are sometimes permitted to build in the interstices of the Fish Hawk's eyry, "like humble vassals," as Wilson observes, "around the castle of their chief, laying, hatching their young, and living together in mutual harmony;" yet they possess courage, and often combine against their powerful oppressors, the Bald Eagles, and drive them from their precincts.

The Fish Hawk measures twenty-two inches in length, and sixty-three in alar extent; upper part of the head, white; general color of the plumage above dark brown; below, white.

Entering the sub-family *Falconinæ* (true, or proper Falcons) the typical group among the *Falconidæ*, we meet with birds of less size and strength, but characterized by great courage, swiftness of flight, and expertness in the chase, often exceeding the Eagles in these points; and in the ancient days of falconry were highly prized in the royal sports.

The JER FALCON, or GYR FALCON, (*Falco Islandicus*, Lath.) is one of the largest and noblest, and probably the most celebrated of the birds used in falconry, its size being near that of the Osprey, and its intrepidity exceeded by none, it boldly attacking the largest birds, as Storks, Cranes and Herons. Its native haunts are the cold, arctic regions of Europe and America, Iceland having always been one of its favorite retreats, while a few are met with along the precipitous coasts of Norway, Sweden and Greenland. Richardson observed it occasionally at Hudson's Bay; Audubon discovered its nest on the desolate coast of Labrabor; Nuttall remarks that a few pairs are sometimes seen in Massachusetts in winter, which is all that entitles it to a rank in the list of our New England birds. Plumage mostly white.

The WANDERING FALCON, GREAT FOOTED HAWK, or DUCK HAWK, (*Falco peregrinus*, Linn.,) is hardly less celebrated for feats of daring than his noted congener just described, but is rather less in size, yet almost equally famed in falconry. This species is common to both continents, if, indeed, it be everywhere the same, which Bonaparte declares is not the case, he accordingly characterizing the present species as distinct from the European, under the name *Falco anatum*,—Duck Hawk; while Audubon found no difference between those he examined in England and the ones he had killed in America. They are everywhere noted for strength and boldness, and their feats of daring are regarded with wonder by the sportsmen along our coasts. In Europe they are said to be found chiefly in the mountainous districts, seldom descending to the plains, and avoiding marshy districts; while in America they are most common along the sea-coast of the Atlantic States, and in the vicinity of lakes and the larger rivers, where the various aquatic birds abound, which furnish them with food,—a difference in habit hardly reconcilable, regarding the bird as identical in the two countries. This formidable Hawk, known generally as the *Duck Hawk*, *Hen*

Hawk, Chicken Hawk, &c., pounces upon his quarry with great velocity and force, striking it while in the air, on the ground, or floating on the surface of the water, with almost equal facility; in the former case striking his victim to the ground with his powerful talons, and returning, picks it up and bears it away. It occasionally displays its audacity in snatching up the Duck killed by the sportsman, approaching boldly even within thirty paces of the hunter who shot it; and in return the sportsman is sometimes fortunate in securing the game struck down by this Hawk. The Duck Hawk is said to breed in trees, retiring to the dark recesses of the gloomy, almost inaccessible cedar swamps to build its eyry, "where," observes Mr. Ord, "the wild screams of this bird, occasionally mingled with the hoarse tones of the Heron, and the hootings of the Great Horned Owl, echoing through the dreary solitude, arouse in the imagination all the imagery of desolation."

The SPARROW HAWK, (*Falco sparvorius*, Linn.,) the smallest of our New England Hawks, is found, according to DeKay, inhabiting the American continent from 54° south latitude to the same degree of north, and is quite common in the warmer parts of the United States; but Nuttall remarks that it is rare in the maritime parts of New England, but it is generally seen in most parts of the Eastern States throughout the year, though not common. Small birds, quadrupeds and reptiles constitute its chief prey, though young chickens from the farmyard are always acceptable; and it occasionally partakes of grasshoppers and other insects. In flight and manner of hunting, it differs considerably from the Falcons above described; it flying irregularly, and occasionally hovering over a particular spot for a minute, as though watching some object beneath it; and at times will watch from a tree-top for a long time for the appearance of mice, or other game. It will sometimes approach a group of small birds with a low and stealthy, but rapid flight, pounce upon one with the rapidity of lightning, and away with it in an instant, striking with terror the remainder of the group at the suddenness of the unlooked for attack.

This Hawk measures ten or eleven inches in length, and about twenty-three in extent; upper parts reddish bay, with seven black spots around the head; under parts, pale yellowish white, with longitudinal spots of brown. Nests in hollow trees, laying four to six brownish eggs.

The PIGEON HAWK, *Falco columbarius*, Linn.,) a little larger than the preceding, and less numerous, is occasionally seen in New England, more commonly in autumn and winter, it retiring far to the north in summer to incubate. Its nest has been discovered at Hudson's Bay, placed in hollow rocks, or decayed trees, composed of sticks and grass, and lined with feathers; eggs two to four, white, thinly dotted with red spots. From its swiftness of flight it is sometimes known as the *Bullet Hawk*; and Audubon mentions that "the daring spirit which it displays exceeds that of any other Hawk of its size;" and adds that he has known them to attack birds in cages suspended against the walls of buildings in the very streets of our cities! It pounces without hesitancy upon Robins, Blackbirds, Sparrows, &c., and even Wild Pigeons, thus proving a serious annoyance to the pigeoner.

LE PETIT CAPORAL, or LITTLE CORPORAL HAWK of Audubon, (*Falco temerarius,*) described by him as a new species, is now supposed to be the adult Pigeon Hawk.

The MERLIN, (*Falco æsalon*, Will.,) a spirited Falcon, not uncommon in Europe, is occasionally met with in the northern parts of this continent, but occurs in New England as a rather rare accidental straggler. It is characterized by the same daring spirit of those already described, and in the "olden days of falconry" was highly prized for the chase.

J. A. A.

OIL FOR BOOTS AND HARNESS.

Some practice and a deal of reasoning from analogy has proved that the very best oil for all applications to leather is the common castor oil, (from the bean of the Palma Christa plant,) and identical with that with which careful mothers sometimes nauseate their children. One of the reasons of its value is that it has less affinity for water than any other oil, and less tendency to harden or thicken the leather, as neatsfoot and other animal oils do. Leather that has been frequently saturated with any kind of animal fat and exposed to water, as boots and harness are, instead of remaining pliable, becomes hard and dry, losing its elasticity, and finally becoming brittle and worthless; but that which is oiled with the extract of the Palma Christa bean, and in a less degree with flaxseed oil, appears to retain its fibrous toughness a great deal longer. The oil is naturally viscid, containing some glutinous matter, which serves a better purpose than animal oil to exclude the water which, when absorbed in leather, is the real cause of its non-elasticity.

Castor oil, if bought by the gallon, is not expensive. It was manufactured a few years ago in Illinois and sold at fifty cents a gallon, and the beans were grown as a field crop at fifty cents a bushel. It is well worth the while of farmers to give castor oil a trial as a lubricator of leather.

For the New England Farmer.

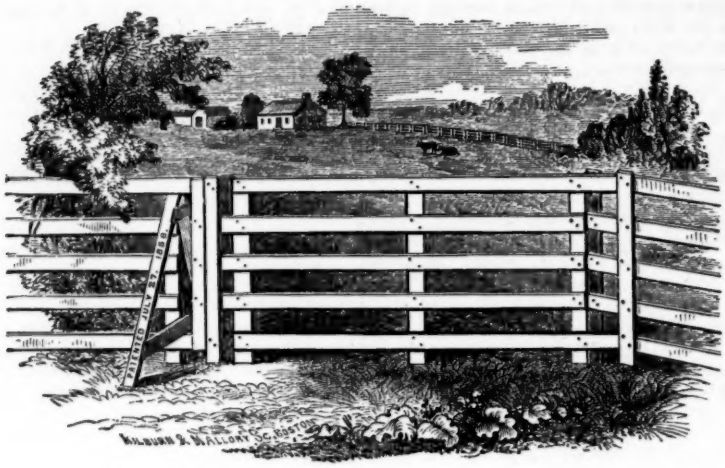
COPPER SOLED SHOES.

MR. EDITOR:—Some months since, I wrote a short notice for your paper in praise of copper soled shoes as a substitute for rubbers. It followed a short editorial notice to the same purport. But experience has not confirmed those views; they do not prove as valuable as we hoped.

I was reminded of this notice by reading the following in the *Boston Recorder* of May 11th, 1822: "Three persons in Sussex, England, have lately lost their lives by wearing sheet copper in the soles of their shoes, to keep the feet dry. When the inner soles give way, the perspiration of the feet, acting upon the copper, communicates to the system an active and dangerous poison."

While on the subject of shoes, I would remark that a physician of Portland (Me.) has been making the anatomy of the human foot a special study with regard to making a shoe which shall be better adapted to it than the present fashion. We all know that a shoe has but little semblance to the foot. We wish the doctor success.

Springfield, Vt., Sept. 12, 1860. A. E. P.



SELF-FASTENING PORTABLE FENCE.

Before entering upon a description of this fence it is proper for us to say to the reader that we have not used it, or seen it in use, and judge of it merely from its appearance, as the model, some six or eight feet in length, stands before us. From this view, however, we do not doubt but the fence will be a good-looking, cheap, and effective one, and feel no hesitation in recommending a trial of it by those who need wood fences. The fence is called by the inventor, "*Vandemark's Self-Fastening, or Hook and Eye Portable Fence,*" and he makes the following statement in relation to it:

The observing farmer will readily perceive the numerous advantages of a Portable Fence which can be easily *put up, taken down* and *removed* from place to place, as convenience may require.

The panels constructed upon the plan of this patent will make either a Worm, Straight, Square or Circular Fence. Note also the following facts.

1st. It can be made in bad weather or in winter, when farm hands are commonly idle.

2d. The fence being all above ground, will last without repair twice as long as a post and board fence.

3d. It is all made of inch boards, and so simple in its construction that any farmer can make it with a hand-saw and hammer.

4th. The same panel will make either a straight or zigzag fence, a square or circular enclosure. When straight, it is supported by a triangular brace put in between the end battens or uprights, as shown in the above cut, and made of the same material as the fence.

It is advisable to use 10 feet rails, 5 inches wide by 1 inch thick. 1,000 feet of lumber will build 27 rods of this fence, which will make the material—

Where lumber is	$8,00	per M.	.....	cost	29	cents	per rod.
"	"	10,00	"	.....	"	36	"	"
"	"	12,00	"	.....	"	43	"	"
"	"	14,00	"	.....	"	50	"	"
"	"	16,00	"	.....	"	57	"	"
"	"	18,00	"	.....	"	64	"	"

With lumber at $12 per M., and posts at 13 cents each, there will be a saving of $8 on every 20 rods of this fence.

The triangular *brace* shown above and spoken of under the 4th head, may be dispensed with and a couple of stakes used by driving one end slightly into the ground and sawing a notch in the other and sliding it under one of the boards. We intend to put it in use in the spring on our farm, where those interested can see it if they wish to.

BEES AND CATS.

From experiments which I have tried, I have found that the visits of humble bees, if not indispensable, are at least beneficial to the fertilization of our clover, *(Trifolium pratense,)* as other bees cannot reach the nectar. Hence I have very little doubt that if the whole genus of humble bees became extinct or very rare in England, the heartease and red clover would become very rare, or wholly disappear. The number of humble bees in any district depends in a great degree upon the number of field mice, which destroy their combs and nests; and Mr. H. Newman, who has long attended to the habits of humble bees, believes "that more than two-thirds of them are thus destroyed all over England." Now the number of mice is largely dependent, as every one knows, on the number of cats; and Mr. Newman says, "Near villages and small towns I have found the nests of humble bees more numerous than else-

where, which I attribute to the number of cats that destroy the mice." Hence it is quite creditable that the presence of a feline animal in large numbers in a district might determine, through the intervention of mice and then of bees, the frequency of certain flowers in that district.—*Darwin.*

For the New England Farmer.

BORROWING AND LENDING TOOLS.

MR. EDITOR:—I have noticed that some of your subscribers, having confidence that you are full of wisdom, and willing to impart to the ignorant, when they meet with difficulties come to you for advice. Now I want advice in a matter that has annoyed me a good deal, and wish you would tell me, and the rest of your readers, what is proper to be done by one in my circumstances. The case is just this: I am a farmer, owning a pretty good farm, with neighbors all aroun l me in the same business. I am in the habit of being neighborly with my brother farmers, borrowing various tools of them as I happened to want them. For instance, I have borrowed a corn-sheller of one man, and because I happened to forget or neglect to carry it home again, and he had to come for it a week or two after, he appeared to be really disturbed in mind about it. So, also, when I borrowed a seed-sower of another, and he came for it a month afterwards, he really looked as if he had a good mind to be so unneighborly as to make me pay for his trouble in hunting it up. Of another, (an odd chap who jocularly calls himself so poor that he cannot afford to borrow,) I borrowed a jack-screw to use in fixing my barn. Before I was ready to carry it home, the wrench somehow got broken; and then I waited till I could take it to the blacksmith and have it mended—and finally forgot it. But after a month or two the owner one day came for it, in some excitement, said he had spent most of the forenoon in looking for the screw among his nearest neighbors, having at first forgotten to whom it was lent; and ended by saying that he expected me to pay him twenty-five cents for his trouble in coming for it. As I am an *economical* man, and he knew it, I thought this particularly unkind. When I told him the wrench was broken, and said he might get it mended and I would pay the blacksmith's charge for it, I really believe he wanted to *swear;* but he didn't do it; he merely said, in a cool and impudent way, that he "thought it rather a hard case, after he had spent a half day in hunting for his tools, to be asked to spend more time in running to the blacksmith's to get them mended!" So you see by what a churly set of neighbors I am surrounded.

Now, Mr. Editor, as you know just how I am treated, I wish you would talk right sharply to these men, and show them how to be neighborly. I do not own all the tools I want to use, and so I *must* borrow; and I cannot be expected always to remember to return them at a precise minute. It is not natural. Pray help me, if you can, and so oblige, JONATHAN DOOLITTLE.

Slackville, Aug. 11, 1860.

VALUE OF SEWAGE.—If we ask the opinions of different persons on the question of "sewage," we receive contradictory answers. All manufacturers of superphosphate of lime are quite agreed on the point, that only the fluid portions of sewage water are valuable in agriculture. They do not, in giving this opinion, deny the good effect of solid matters, but only mean to say that they are not worth the trouble of being collected for manure, because they are ready to deliver from their manufactories these matters to agriculturists. The manufacturers of ammonia-salts, and the dealers in guano, take an entirely opposite view. These hold that only the solid sewage matters are to be looked upon as important. There can, however, be no doubt that both the fluid and solid matters are valuable for agriculture.—*Liebig's Lectures.*

For the New England Farmer.

TOWN FAIR IN NORTH READING.

An agricultural fair was held in this place Oct. 2, under the auspices of the *North Reading Farmers' and Mechanics' Club*, and proved a decided success. No cattle were exhibited, but the display of fruit, flowers and vegetables was unusually fine, and the contributions of the ladies in the shape of embroidery, worsted work, paintings, etc., showed, most conclusively, that the ladies of the place, at least, are fully up to the times.

Gentlemen who were present, and who have also attended some of the County Fairs, were forced to acknowledge, that, although the quantity was less, the quality of the contributions was even superior to that of the greater shows.

If you, Mr. Editor, had not positively forbidden correspondents to enter into details, it would give me much pleasure to enumerate some contributors worthy of especial honor; as it is, I cannot refrain from mentioning the name of Aaron S. Hewes, Esq., of North Reading. His display of apples, it is universally acknowledged, was by far the best, and we, "of this ilk," believe them unsurpassed. Mr. H., though a manufacturer, is far more of a farmer than some who make farming their profession. G. F. FLINT.

North Reading, Oct. 4, 1860.

REMARKS.—Thank you for the notice of your Town Show, and also for mentioning particular cases that are specially meritorious. This is what is wanted,—but not a dull detail of one or two hundred premiums.

PRESERVATION OF FRUIT.—Some time last spring, Mr. LEWIS H. SPEAR called at this office, and showed us samples of fruit put up without being cooked. Some of it had been prepared for several months, and still retained the flavor of ripe fruit when first gathered. The samples of apples were very beautiful, although they had been put up for several months, were open to the air, and were neither cooked, or in a rich syrup. Several weeks ago, currants and berries were put up in our family by this method, and they retain all their original freshness of flavor, though their color is somewhat changed. The process is very cheap and simple.

A DAY ON TWO FARMS.

Rochester, Mass., Oct. 4, 1860.

GENTLEMEN:—I came here yesterday, by request, to look at a couple of farms; that is, to hold a consultation over them with their proprietors, something as physicians do over a sick patient.

The first farm looked at, is the property of CHARLES H. LEONARD, Esq., and consists of some two or three hundred acres, about eighty acres of which he has already reclaimed, or is engaged in reclaiming—the other portion is principally in wood. Mr. L. is a New York merchant, but being born upon this soil, and having passed his boyhood here, is expending a portion of his ample fortune in bringing the estate into an attractive and fertile condition. His object has been up to this time to clear the land of stumps and rocks, surround it with stone fences, lay permanent roads, underdrain and level, rather than to fertilize and secure crops. Within five years, an immense labor of this sort has been performed, and substantial buildings erected. Two hundred and fifty rods of split stone wall has been laid, some of it over ditches filled with stones, and intended as drains, and the balance laid upon small stones in trenches. The walls are four and a half feet high, three feet wide at the bottom and eighteen inches at the top, and built thoroughly in straight lines, or in graceful curves, as the nature of their location required. The material used is granite, composed mainly of quartz, black mica and feldspar.

The rocks were mostly found beneath the surface, were dug about, split with wedges, taken out, and the places they occupied, filled with the smaller stones turned out in plowing. This process results in a pretty thorough trenching of a considerable portion of the fields, so that where the work was first completed, and the land seeded to grass, they have secured an average crop of three tons per acre of the best clover and Timothy hay. Some of the land treated in the same manner was in corn, and I found it a finer crop than any I have seen this autumn—one small piece must yield, I think, at the rate of a hundred bushels to the acre. Some splendid ears are now before me of the King Philip variety, and are ten, eleven and twelve inches long. Mr. Leonard's fine green-house, mill-pond, lawns, and many things relating to the farm, are examples of energy, and a progressive spirit, that are creditable to his good taste, and cannot fail to inspire others to profit by them. They may not enter so extensively into improvements as he has done, but his thorough-draining, and following crop of three tons of hay per acre year after year, is only an example that any of his neighbors may follow, that possess the progressive spirit to prompt them to it. In this operation, there is no fancy to be indulged, but it is one of plain dollars and cents calculation, which will probably add ten to twenty per cent. to the value of the crops taken off. The proprietor of this estate is fortunate in committing the details of its management to the skill and intelligence of Mr. JOSEPH COE.

My next visit was to an adjoining farm belonging to the gentleman just named, but who has only recently come into possession, and does not yet reside upon it. It includes one hundred acres of variable soil, and has always been managed in the old routine of corn, rye, pasture, for a few years, where there was nothing to be eaten, and then corn and rye again.

Mr. Coe's principal object is the culture of cranberries, and he has already commenced the construction of a reservoir for water, whereby he will be able to flow his cranberry meadows whenever frost is anticipated, or when the plants are attacked by insects. His contrivances are ingenious, will not be expensive, and we think will be effective. He will also enter upon a system of tile drainage, which, conducted by his intelligence and skill, must afford a good example to all around him. At some future day, I hope to see his cranberry meadows in their prime. He had just made a visit to the Cape to examine the modes of cranberry culture there, and had learned several important facts which are interesting and valuable.

Mr. Coe is a skilful, intelligent and progressive farmer; does not think he knows so much as never to ask a question; believes a great deal in books, but not *all* that is said in them; closely observes the practices of others; and is as willing to impart his own knowledge, as to draw it out of others. Very truly yours,

SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN.

CULTIVATING PEACH TREES.

The peach formerly succeeded nearly as well in southern New England as in the middle States. Old people tell of the large crops of fine peaches that were common in their youth, and say that the trees were then thrifty and free from disease. But all this is changed now. A healthy peach tree is the exception, disease the rule, and of course it is useless to expect a good crop of fruit from unhealthy trees.

There has been much speculation as to the cause of this decadence of the peach. Some, notwithstanding the negative evidence of meteorological tables, attribute it to a change in the climate; others to the unnatural method of propagation by budding, and others to the ravages of worms and insects. But whatever the cause, the fact is patent to all, and probably the most that can be done by human means will be merely a mitigation of the evil.

As far as the writer's experience goes, it is decidedly against cultivating the ground beneath peach trees. Those in his garden that were under cultivation, have been exceedingly short-lived,

while others, closely surrounded by green sward, and set out at the same time, are still in bearing order and tolerably healthy. A neighbor some years since set out an orchard of about a hundred peach trees, cultivating corn and root crops between. Most of the trees died within three or four years from the setting, and scarcely a dozen remain at the present time. When the trunks are closely surrounded by grass, they are seldom attacked by the borer. It would be interesting and profitable to know what the experience of others has been in regard to the cultivation or non-cultivation of the peach.—*Taunton Republican.*

For the New England Farmer.

FARMERS' WIVES AND DAUGHTERS.

Most humbly would I plead pardon of Sister Polly, for being so impolite as to contradict her, yet so thoroughly convinced am I of the fact that the labor of the farmer's wife and daughter is no more severe than that of other ladies, that I must still persist in my statement. I am not prepared to judge of farming in New Hampshire, but would only speak of it as it is in Massachusetts. The experience of a farmer's daughter only is mine. But I have the testimony of one who has been a farmer's wife for thirty-five years—who has brought up a large family, and who *ought to know.* Truly, there are many hours of severe toil; yet she has had leisure for improving the mind, and "extending her knowledge beyond the limits of her native village," and has kept her heart open to the "sweet influences" of nature.

My sisters have all married mechanics, and, observing their daily tasks, I prefer my own. But, as Polly says, "all the world are not mechanics." Would she be ready to exchange tasks with any minister's wife of her acquaintance? And why the work of a lawyer's, or doctor's, or merchant's wife, (aside from the dairy work, which occupies but a small portion of the day,) should be less arduous than that of a farmer's wife, I cannot understand. The same amount of cooking must be done, washing and ironing; dust is "no respecter of person" or occupation; doctors and lawyers are liable to forget the scraper and mat at the door, and to leave hat, coat and boots for wife or daughter to put in place. Doctors' and lawyers' children as mercilessly leave dirty little fingermarks upon the windows and paint, and are as diligent in tearing rents in aprons and pants, as farmers' children.

I think Polly is inclined to consider wealth and happiness as inseparable. One, of olden time, reputed wise, prayed, "Give me neither poverty nor riches." This is the situation of most farmers, neither in poverty, nor possessing great riches. Enough for comfort and luxury. And this may be gained, "unconnected with other business," although the farmer commence life deeply in debt.

A word concerning self-education. No one need be satisfied with the mere rudiments of science. With health, aspiration, courage and perseverance, any woman may be "thoroughly educated." The "deep mysteries of science have been unlocked" to many who were dependent upon their own energy, and will yet be unlocked to many more. A large number of our farmers' daughters are teachers in cities or towns, often in positions of great responsibility; one, I now call to mind, a farmer's daughter from the Granite State, now one of the "Faculty" of a female college. A few teach, because compelled to depend upon their own resources; more, because their energetic spirits scorn to remain in idleness—burying their talents, when a wide sphere of usefulness is open for them; because they love the work, not because driven by poverty from the home-nest.

It is my humble opinion that we "should be content without pictures," if we cannot consistently possess them. With a moderate amount of genius, taste and contrivance, I think our walls need not be unadorned. Place all the works about your home that you are able. The heart will grow better for them. But because Raphael, Angelo, or Claude Lorraine may not speak to me from my library walls, I cannot consider it a duty to pine in melancholy, bemoaning my sad fate. When the rose on the window-seat opens its crimson petals, tell the child of the blessed Jesus, who is the "Rose of Sharon," who once trod this earth, and who so loved little children, that He died for them; and whenever his bright eyes rest upon the flower, will it not speak to him of the loving Saviour, with as powerful a tongue as a picture could?

Thanks to Polly for her invitation to visit her mountain home. The song of the wash-board is an old familiar air, but, as with us, the spinning-wheel is but a relic of "long ago," now furnishing the attic, I should doubtless enjoy its new and unknown melody. Visit my cottage home, Polly, and I will assure you that baking, sweeping and scrubbing shall all be finished, without leaving "mother to preside in the kitchen," in time for a quiet chat in the parlor, a horseback scamper over our beautiful plain, a walk by the blue water, or heart-wanderings in "Dream-land," with no intruding care to dim the sunshine. ANNA.

October 1, 1860.

For the New England Farmer.

FLOWERS ADAPTED TO A NORTHERN WINTER.

Seeing an inquiry in the *Farmer* of July 14, in regard to flowers adapted to a Northern winter, I send a list which I hope will prove satisfactory. Namely: Cupid's car, or Monk's-hood; Baltimore rose; Drummond's phlox, all varieties; Canterbury-bell; Wall flowers; Marvel of Peru; Feverfew; Chinese pink; Mullen pink; Moss pink; Grass pink; Persian lilac; Foxglove; Flower-de-luce, purple and white; Dwarf Iris; Narcissus; Tulips, all varieties; Gladiola; Rudbeckia; Tassel-flower; Garden Heliotrope; Double Buttercup; Valeria, white and blue; Myrtle; Perennial Larkspur; Mock-orange; Flowering Almond; Perennial Pea and Pansy, all varieties.

There are many more which I have not mentioned, biennials and perennials, that would stand a Northern winter, with slight protection from frost, J. T. SABINE.

Jeffersonville, Vt., 1860.

SWAMPS AND MEADOWS.—The reader will find an exceedingly interesting article upon this subject in another column, to which we ask attention.

For the New England Farmer.

CROPS IN EASTERN VERMONT.

While portions of our country, and even of our own State, have suffered from the effects of drought the past season, we who are favored with a soil unequal in smoothness, and unequalled in fertility and capacity to endure the effects of extreme heat and cold, flood and drought, by almost any portion of our country, are rejoicing in well stored barns and granaries. Though our hay crop is less than an average by, say one-fifth, the quality is unusually good, and we have at least an average supply for our stock. Our smaller grains are almost without parallel, even on our own fertile hillsides. Wheat (spring) ranges from 30 to 40 bushels, and in some cases even more, per acre, of unusually good quality. Oats, from 60 to 100 bushels per acre; some fields go even higher than this. 80 bushels is a very common yield. Rye and barley also fully repay all the pains bestowed upon them. Corn is full an average crop, and the fodder is secured much better than it often is, so that we can winter as much stock as generally.

Now what will our poor kinsfolk on the naturally barren pine plains and white birch hillsides of Massachusetts say to 100 bushels of oats per acre—75 for an average? 40 bushels of the finest wheat? 50 to 75 bushels of corn? 15 to 20 ox-loads of pumpkins per acre? True, they can sell what rye straw they raise, and get more for their oats. But how many of them think they can afford to feed out all the grain they raise, while they strive to raise all they can feed? True, you have advantages over us, and we have more over you. Do not think that we must send you our oats and corn to raise our interest money. We can better afford to feed them here, and send you our butter, and cheese, and beef, and pork. Think not to buy our oats for a song, though our granaries groan with their burdens. We have learned that as bread is the staff of life, so manure is the staff of the farmer, and that grain is the grand producer of good manure. You may sell your berries, cherries, and plums, from your worn-out lands at great prices, and then pay your 8 to 15 per cent interest. We can find means to pay our six per cent., (a plenty at that,) by selling you butter at 20 cents and pork at 7 cents, nett, and then have the pleasure of seeing our colts going to Napoleon, and our nags to your cities, to draw the solid men of Boston, who have plenty of money to pay for them!

Come, brother farmers, in eastern Vermont, who have plenty of grain, let us feed it to our stock, unless we can get fair prices, and then sell but little, and see if our future crops do not show us a better return than the speculator does.

Vermont Eastern Slope, Oct., 1860. P. J.

CENTRAL HEAT OF THE EARTH.—The rate of increase of heat is equal to one degree of Fahrenheit for every forty-five feet of descent. Looking to the result of such a rate of increase, it is seen that at seven thousand two hundred and ninety feet from the surface the heat will reach two hundred and twelve degrees, the boiling point of water. At twenty-five thousand five hundred feet it will melt lead; at seven miles it will maintain a glowing red heat; at twenty-one miles melt gold; at seventy-four miles cast iron; at ninety-seven miles soft iron; and at one hundred miles from the surface all will be fluid as water, a mass of seething and boiling rock in a perpetually molten state, doomed possibly never to be cooled or crystallized. The heat here will exceed any with which man is acquainted; it will exceed the heat of the electric spark, or the effect of a continued voltaic current. The heat which melts platina as if it were wax is as ice to it. Could we visually observe its effects, our intellect would afford no means of measuring its intensity. Here is the region of perpetual fire, the source of earthquake and volcanic power.—*Recreative Science.*

THE MECHANICS' FAIR.

Among the articles which we noticed with special interest at the late Mechanics' Fair, were a Patent *Bean Sorter and Cleaner*, a *Huckleberry Picker*, an *Oat Cleaner*, and a *Potato Sorter*, four small, ingenious, *new*, and highly useful articles to any farmer, each of which would annually save three or four times its cost, by enabling him with trifling labor to present his products to the purchaser in a clean and perfect condition, and then by materially enhancing their price. It is not the large machinery, the cotton gins, power threshers and mowing machines, that prove of the greatest usefulness to man, but the cooking stoves, apple parers, Babbitt's metal, washing machines, clothes' pins, and many other small and cheap, but indispensable articles. The articles enumerated above are of this character. They have been invented and manufactured by SANFORD ADAMS, of Boston.

An *Adjustable Ox Yoke*, by J. H. BRIGGS, Gloucester, Mass., is an excellent article, the design of which is to enable oxen unevenly matched to draw evenly, by a rack at the under side of the yoke; and it is all the more valuable because it can be fitted to any yoke now without it.

DAVID S. NEAL, of Lynn, had a *Fire Escape for Horses*, showing the crib, mode of fastening, and means of escape for the horses when their stable is on fire. We think it would be a good contrivance in large stables filled with horses.

JOHN M. DEARBORN, of Roxbury, had a *Coal and Ash Screen*, of the most primitive character, being merely a straight handle, much like a shovel handle, run through a sieve, and resting in grooves on the top of the barrel. A simple, cheap and efficient mode of sifting coal and ashes,—but does not prevent the flying of dust.

Messrs. LOOKEY & HOWLAND, Leominster, Mass., presented one of their unrivalled *Apple Parers*, which pares an apple so quick and easily that you scarcely know it is done!

A *Double-Acting Apparatus, for Sifting* any flour or meal into different grades, was presented by M. H. COLLINS, Chelsea, Mass. It is a new

invention, and designed to take the place of bulky rolling screens, and to save expense in flour mills. The inventor claims that it makes no dust, requires no machinery to screw the flour to and fro in the chest, saves room, will not clog, and is easily managed. Also, that a machine of this kind six feet long will do as much work as two rolling screens, eighteen feet long, and make as fine flour. With this he had a *Winnowing Machine* for cleaning corn, rye, oats, barley, grass seed, beans, &c., which was compact and effective.

J. J. AYRES, East Hartford, Conn., had a model of a *Self-Acting Farm Well*, which is claimed to be equivalent to a living spring in the pasture, or yard, as an animal can bring its own supply when it is needed. It is a capital contrivance. We have pictured and described it in the *Farmer* heretofore. He also presented a *Self-Acting Gate*, a model of which operated admirably. It is too expensive for common use, but just what would be appropriate for the entrance to parks and pleasure grounds.

Mr. T. N. BREED, of Lynn, had a collection of *Grindstones*, hung on friction rollers, and which were in every way excellent.

Messrs. WHITTEMORE, BELCHER & Co., Chicopee Falls, presented the *Eagle Hay Cutter, Corn Shellers, Meat Masher, Root Slicer, Apple Parer*, &c., all of which were admirably constructed.

Mr. R. S. TORREY, of Bangor, Me., presented numerous specimens of honey, together with hives filled with living bees, so tastefully and ingeniously arranged as to especially attract attention. The fruits of these bees, and the intelligent manner in which their master had controlled their labors, needed only to be seen to be appreciated. Mr. Torrey does not only say what *can* be done, but shows what he *has* done. His hives are constructed upon true philosophical principles, and are the only artificial ones we have ever seen which afford a perfect winter ventilation. As honey abounds in the country, and is a wholesome and palatable article, and as the culture of bees has a happy influence upon those who engage in it, we regard the information that will enable us to manage bees and secure their products as valuable to the community.

W. S. TILTON had a large and somewhat complicated machine for cutting up corn stalks, but as no one was present to explain its operations, we did not get a clear insight into it.

Several *Rotary Harrows* were on exhibition, by THOMAS R. BLAIKIE, Boston.

H. B. DAVIS, of Lexington, had *Patent Horse Rackets*, an excellent article, that enables the horse to travel over marshes or fresh meadows that are too soft for the bare hoof.

O. R. CHAPLIN, of South Boston, had a model of a *Patent Flexible Knife-Bar Mowing Machine*. The inventor anticipates important advantages from the ability of his knife-bar to accommodate itself to *uneven surfaces*. We doubt whether his hopes will be realized in this particular,—but the machine has other important qualities, and especially one in the power given to the motion of the knives by the *leverage* attached to them. The ease with which it can be thrown in and out of gear, and backing without changing anything, are decided advantages. We hope to see a full-grown machine in operation.

H. MANN, East Attleboro', Mass., had a *Vegetable Hand-Weeder, with Garden Seed-Sower Attached*. We have spoken of this Weeder before as a most valuable labor-saving machine.

Manny's Patent Improved Mowing Machine, by ALZIRUS BROWN, Worcester, Mass., *Wood's*, by WALTER A. WOOD, Hoosac Falls, N. Y., and the *Buckeye*, by PARKER, GANNETT & OSGOOD, were on exhibition, and are all valuable machines and have won good reputation for themselves. With the Manny Machine there was a *Spring Tooth Horse Rake* which we thought had most or all the good parts of that important implement.

The model of a *Potato Planting Machine* appeared as though a full-sized one might be a valuable acquisition.

A little, simple and cheap *Fire and Garden Engine* was exhibited by JOSEPH BIRD, of Mount Auburn, Mass. It is a new, easy working, and yet most powerful little machine. It is so small, (weighing less than two pails of water,) that it can be taken to the fire in a moment, and from its largest pipe, 12 gallons of water can be thrown upon the flames in one minute. It is so strong that it cannot be broken by working; it is not liable to get out of order, and with proper care will last a century. The best possible recommendation of it that could be given was from a President of a State Street Insurance Company, who said, "Where Bird's system of preventing fires is adopted, I will insure at one-half the usual rates!" Mr. Geo. E. Bigelow, of Concord, is the agent for the sale of them in that section of Middlesex county.

PARKER, GANNETT & OSGOOD, Boston, presented a *Hoeing Machine* and a *Potato Digger*, invented by L. WETHERELL, Worcester, Mass. A good potato-digger is an article greatly needed on the farm. The only way one could judge of either of these machines would be from actual test in the field.

R. P. WILSON, of Boston, had an *Air Pressure Churn*. It is claimed that this churn will produce more butter from the same cream than any other, and that it will be more yellow, and come quicker. It certainly must be more easy to clean than any other we have seen.

WHITTEMORE BROTHERS presented a *Patent*

Cylindrical Meat Masher. It is intended for mashing beef-steak, instead of pounding it, and by the noise driving every body out of the house, and it is said makes the toughest equal to the most tender. It certainly promises to do much toward it. We have strong hopes, now, of eating a tender beef-steak.

A *Patent Tree-Cutting* or *Felling Machine*, by Col. HAMILTON, of N. H., attracted much attention. It can be used to saw a tree down, and saw it into blocks after it is down. It is simple and effective. We saw it take a tree off at the butt with great facility by a single man-power!

A NEW SEDATIVE.

The *Journal de Chimie Medicale* contains the following remarkable account of the discovery of a powerful sedative in cases of neuralgia by Dr. Field: Some time ago that gentleman was induced by a homœopath to put two drops of a solution, supposed to be diluted to the first degree, on his tongue, in order to try its effect. After the lapse of about three minutes, he felt a sensation of constriction at the base of the neck, then violent singing in the ear, while his forehead became covered with abundant perspiration. He then was seized with uncontrolable fits of yawning, and remained senseless for several minutes; his head fell back, his lower jaw sank down powerless, he became extremely pale, and for two minutes his pulse was silent. The homœopath, perceiving these symptoms, was terrified, thinking he had unconsciously committed a murder. Stimulants, however, brought Dr. Field to consciousness again, but he continued to feel a headache for half an hour after, with a sensation of pressure at the epigastrium and general weakness. These symptoms disappeared in the course of that time. It was evident that the substance employed was a powerful poison, and that it had not been sufficiently diluted; and it turned out to be nitrate of oxide of glycile, a substance obtained by treating glycerine at a low temperature with sulphuric of nitric acid. One drop, mixed with 99 drops of spirits of wine, constitutes the first dilution. Dr. Field was immediately struck with the idea that he had experienced the effects of what in a much weaker dose, must be a useful sedative of the nervous system; while the homœopath was overjoyed at having discovered what he conceived to be a powerful remedy for apoplexy. After various trials upon animals, Dr. Field at length resolved to test this new remedy on patients. He did so first on a lady 68 years of age, who had long been suffering from neuralgia, which returned at intervals of three hours, and had resisted every remedy known, such as ammonia, asafœtida, chloroform, &c. The fourth part of a drop of the above solution being administered, she was at once relieved; but some of the symptoms experienced by Dr. Field being felt by her also, she discontinued the remedy, but her sufferings soon obliged her to have recourse to it again, and she was completely cured. It has since been tried in cases of headache and dental neuralgia with equal success.—*Galignani's Messenger.*

ROTATION OF CROPS.

There seems to be a feeling more or less prevalent among farmers, even among the readers of agricultural papers, that those who write upon "Rotation of Crops," "Improved Stock," "Drainage," "Manufacturing Manures," "System in Farming," and similar topics, belong generally to that class known as "fancy farmers," or as "city folks who farm for amusement, without regard to the cost." We propose, therefore, to vacate the editorial chair for the time being, and allow an individual of the "practical" class, one who "has made a fortune at farming, or a considerable portion of one, and who has the ability to tell how it was done," to use our editorial pen. He insists on using the big "I," but as he is a Scotchman, and promises to introduce himself, this little bit of independence will be excused. It may be proper for us to say that he comes to us with recommendations from the Secretary of the Canadian Board of Agriculture. It will be noticed that our favorite crop, Indian corn, has no place in the rotation of our Canadian friends. Its introduction, or any other improvement on his system, we leave to the good judgment of each one of our readers; believing that some will be glad to know how a poor man has improved a poor farm, and made money by the process.

INTRODUCTORY.

I came to the country thirty years ago, and burdened with a debt of $200; I leased a worn-out farm in Lower Canada of eighty-four acres, in the midst of a French population, and at an annual rent of $225. Well, in the space of 21 years, I have paid my original debt, and saved enough to enable me to purchase in the neighborhood a much better farm than the one I rented. The owner of the farm which I bought, was going on every year from bad to worse, until he was forced to sell it, whilst I, the tenant of a less productive farm, and paying rent all the while, was enabled to buy him out, as just said. What was the reason of this anomaly? The Canadian was stronger than I was, had equally good health, and no rent to pay. The reason was that he had no system; he let his land become exhausted and full of weeds; he let his stock starve; he wasted his manure, the gold of the farmer, and let everything go on to ruin for want of method; but when I had got hold of this same farm, and had applied the system which I am about to describe, the whole was brought gradually, field by field, into good condition by the end of six years; since then, the condition of the land has steadily improved, and that by resources drawn wholly from within itself. The system to which I allude is known to all good farmers everywhere as the basis of all improvement: I mean that of

A ROTATION OF CROPS.

There are two sorts of reasons in favor of a rotation of crops.

1st. Because different plants draw from the soil different sorts of food, so that one plant will

grow freely a in soil which is worn out as regards another.

2d. Because the crops being various, the occasional failure of one is not so much felt, seeing that the others furnish subsistence sufficiently without it.

In the beginning of the application of this system, divide the arable portion of the farm, of whatever size, into six parts or fields. Apportion the crops as follows:

1st. Root crops, such as potatoes, carrots, beets, parsnips, &c., (turnips and also flax,) and in cases where the land is not sufficiently open for a crop of this kind, the field must be left in fallow.

2d. Crop of wheat or barley, (seeded with grass.)

3d. Crop of hay.

4th. Pasture.

5th. Pasture.

6th. Crop of oats or peas.

That field of the series which is in best condition for a root crop, should be called field A.

The best for wheat or barley, B.

That which is actually in hay, C.

The pasture fields, D and E.

That which is best for oats or peas, F.

Each field for the first year ought to be appropriated to the crops above mentioned, and after the fashion now in use among farmers, except in the case of field A. By this plan, they will at all events still get as much from their five fields as they get at present.

In order to render the thing more simple and easy of comprehension, I shall suppose myself to be again obliged to take a worn-out farm in the autumn of 1849. The first thing that I should do, would be to divide the land into six fields, by proper fences, with communication from the barnyard to each field, and from one field to another, and I would then take for field A, that which appeared best for green crops or roots: I would collect all the manure which I could find in or out of the barns, I would take up the flooring of the cow-house, stable and piggery, and I would take out as much of the soil underneath as I could get for this soil is the essence of manure, one load of it being as good as four or five loads of common dung. The portion thus removed ought to be replaced by an equal quantity of ordinary soil, or, if it be possible, of bog earth, which might be removed when necessary afterwards.

The dung and other manure thus collected, should be placed on the field A, in September or the beginning of October, spread with care, (as far as it will go,) and covered up in a shallow furrow.

In spring, all the manure made during the past winter should be carted to the field, placed in a heap, and twice turned. All bones should be gathered and broken up with a hammer, all coal and wood ashes, scrapings of sewers, the dung from the fowl house, and the contents of the privy, should be collected and made into a compost, with dry loam or bog earth. This manure may be used for that portion of the field devoted to cabbages, potatoes and turnips.

Manures are of the first importance to the farmer, and he must do everything in his power to increase their amount. The system here proposed is calculated so as to increase the quantity of manure in proportion as the soil becomes improved. The farmer ought not to sell a particle of his hay or straw, because these are the principal materials for manure; and, consequently, it is infinitely worse to sell the manure itself. The manure thus economized, will suffice each year for the field which is to receive the root crop, (No. 1.)

The greater variety there is in the crops of this field, the better it will be, provided the soil is suitable for them. Thus, this field ought, as nearly as possible, to look like a kitchen garden.

SUCCEEDING CROPS.

I have done all that I can for field A. I have weeded and manured it as well as I can: and after having taken the crop of roots, &c., this year, and the crop of wheat or barley next year, I leave this field to rest until the other fields have been improved in the same way. In the following year, the cultivation of the different crops will be according to the following order:

Crop No. 2, (wheat or barley,) in the field A,
Crop No. 3, (hay,) in the field B,
Crop No. 4, (pasture,) in the field C,
Crop No. 5, (pasture,) in the field D,
Crop No. 6, (oats or peas,) in the field E,
Crop No. 1, (green or hoed crops,) in field F,

and so on, changing each year until the seventh, when crop No. 1 will come back to field A, and the whole will then be in a good state of fertility, and free from weeds.

The above system has been proved to be capable of restoring old land, and extirpating all weeds. It is economical, and does not require more capital than the actual system, or rather than the present absence of system, requires. It will restore fertility to the soil, and maintain it by the products of the land itself. Manures got from other quarters than the farm itself, are always expensive, and, at a distance from town, are often not to be had at all. It is simple and easy of application.

It may be said that six years is a long time to wait for the renovation of the whole farm; but I will reply that I know of no other means by which it may be done in less time, from its own resources; and it is worthy of observation that the land is improving every year. The produce is larger, even for the first year under this system, than it is under the present mode of culture; and from year to year, the land is improving, field by field, and is producing more and more, so as to pay the farmer better than it does at present, and to recompense him doubly afterwards, when the whole shall have been improved under a system of rotation."

TREE PLANTING.

"Have you never heard of the student, who, on being told that the crow would sometimes live a hundred years, bought a young crow to try the experiment?" Yes, indeed, we have heard of him —the irony is excellent—and of Dr. Johnson's growl about "the frightful interval between the seed and the timber." Still, we say, plant trees. They who plant at once, instead of wasting their breath in selfish complaints of the shortness of life, find luxuriant foliage waving over them much sooner than they expected. But, whether you live to see the maturity of your trees or not, be benevolent enough to plant for posterity. Transmit to your children the inheritance of ru-

ral beauty received from your fathers, greatly augmented. By all means plant, and plant well, and the result will overpay the labor. And let not your work end with planting. Feed your trees from year to year with generous food, and guard them from injury. And, in the words (slightly altered) of an old planter: "What joy may you have in seeing the success of your labors while you live, and in leaving behind you, to your heirs or successors, a work that, many years after your death, shall record your love to your country! And the rather, when you consider to what length of time your work is like to last." If you have country homes to embellish, be content with simplicity. Remember that a great establishment is a great care, and that the proprietor is apt to become a slave to it. Let your dwelling-places be marked with what painters call "repose." Make them the abodes of comfort and refined enjoyment, places which will always afford you agreeable occupation, but not oppress you with care.—*North American Review.*

EXTRACTS AND REPLIES.

WHITE AND RED GRAPES.

Mr. Fay:—I send you a few of each kind of grapes, in order that you may know what those vines I sent you this spring will produce when they come to bearing, and that you may reject them at once if you do not like them. If you do think them worthy, as compared with other grapes, I should be pleased; and if you please, you may invite the editor of the *Farmer*, to look at them.

The top layer is the red grapes, the bottom the white; the white vine had but very few on it this year.

Foxboro', Sept. 25, 1860. L. R. Hewins.

Remarks.—The above note was sent by Mr. Hewins to Mr. Fay, to whom Mr. H. had sent some grape vines. Mr. Fay has kindly brought us some of the grapes spoken of, and we have tasted and compared them with some other varieties now quite common in every part of the State. The reader, we believe, will understand our position with regard to the cultivation of fruits—it is this:—*Never to encourage the cultivation of fruit of any kind, unless it is of the first character.* It requires no more room, or care, to cultivate a good grape than to cultivate a poor one, and when the fruit is produced there is this difference—the good fruit is pleasant to the palate, nutritious, and affords a real pleasure in presenting to friends, or pocketing its profits in the market,—while the poor or indifferent fruit gives no pleasure to the taste, mind or pocket, and one is all the worse for eating it. If our friend Hewins could eat a grape now hanging in beautiful purple clusters on fifty farms in the town of Concord, and nearly every other town in the State, he would find no hard core remaining upon the tongue, and a sharp acid coming from it when pressed too closely, but a soft, juicy, aromatic flesh, dissolving in the mouth readily, and invigorating the whole system. We cannot judge of fruits singly—the test is in comparison. We do not think the grape sent us ought to be cultivated. Just as well to have a better one.

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SQUASHING OUT.

At the fine display of fruits and vegetables in this place the present week, I noticed four squashes weighing 338 lbs. on one vine, that grew in the garden of Mr. W. T. Dole. The seed that produced these was taken from the squash grown by Mr. Porter the last season, that weighed 164 lbs. There were also 29 squashes of the marrow variety, weighing 395 lbs., varying from 12 to 20 lbs. each, in appearance of superior quality. The general aspect of the show was equal to anything of the kind I have ever seen, and was so pronounced by disinterested observers. P.

South Danvers, Sept. 26, 1860.

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WOOD MATTRESSES—IRON GRIST MILL.

In your issue of Sept 8, under the head of "Mattresses filled with wood," you say, "one of the Yankee inventions of the past year is a machine for making curled hair for mattress-filling out of wood." Can you give me the inventor's address or the venders, or let me know where it can be seen in operation, or give me any information in relation to it?

I saw on exhibition in Quincy Hall, a few days since, a recently-patented iron grist-mill; but there was no one in charge of it to answer questions, neither is it noticed in the "Journal and Catalogue." I hope this will meet the eye of the inventor or agent, and induce him to advertise it in the columns of your widely circulated and useful paper. Lowell.

Remarks.—The article about mattresses was a "waif" which we found in an exchange. It interested us, and it appears did others—but we know nothing personally of it.

The iron grist mill attracted our attention in the Fair. It is called "The Union Portable Feed and Flour Mill," E. J. Hyde, Proprietor, Boston.

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GRAPES.

Mr. John Cook, of Sandwich, Carroll county, N. H., has this year raised grapes, measuring three and one-fourth inches in circumference. The scion upon which they grew was obtained from Lowell, Mass., from the vintage of D. Carter, Esq. They are of the Mammoth Globe Seedling. J. P. S.

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SPRING WHEAT—A GOOD CROP.

Mr. Alpheus Bachelder, of this town, raised, the present season, a field of four acres of spring wheat, which yielded thirty-two bushels to the acre.

The soil is a clay loam, and descends slightly to the south-west. Mr. Bachelder purchased the land a few years since, at forty dollars per acre, which was thought by some a large price.

Calling the thirty-two bushels $1,50 per bushel, and the straw $4 per acre, the crop amounts to $52 per acre, a very good return for one year.

Spring wheat is mostly raised here in this vicinity, and considered a much safer crop than winter wheat.

Springfield, Vt., Oct. 1, 1860. J. R. Walker.

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GROWTH OF COLTS.

I would like to inquire through the columns of the *Farmer* if there is any correct way of knowing, by measuring the limbs or otherwise of a colt three or four months old, how large it will be when it is fully grown, and at what age, with proper treatment, it will reach its full size? A Farmer.

Andover, N. H., Sept., 1860.

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A DISEASED OX.

I have an ox that has not chewed his cud for the last eight weeks, but eats as well as ever. When I work him he lows and makes a gurgling noise. I have tried various remedies that my neighbors have prescribed, but to no good purpose. If you, or any of your readers, will inform me what to do, they will confer a favor. A Subscriber.

Warren, Sept. 26, 1860.

A Bartlett Pear.—The finest specimen we have seen this year, is from the garden of Wm. C. Brown, Esq., of Chelsea, and the product of a good sized tree set only two years ago. This shows what large and fine trees will do when properly transplanted and tended.

AGRICULTURAL EXHIBITIONS.

September brought the great agricultural festivals of the farmer, which have got to be almost as much of an institution as the Fourth of July or Thanksgiving. That they have been the means of calling attention to the great Art, and of decided improvements and better modes of husbandry, cannot be doubted; and that they have introduced some objectionable features not contemplated by the laws encouraging them, or by those persons who were principally instrumental in establishing them, is to our mind equally clear. The tendency is, we notice, in each returning year, to depart more and more from the original purposes of their foundation, and fall into practices essentially opposite to those upon which they were started. The farmer himself is gradually losing his hold and control of them, and there are symptoms everywhere that elements of discord are already introduced that will finally destroy their usefulness. In the light of these circumstances, we cannot help entertaining the question, at least, whether the bounty of the State has not been continued quite as long as is profitable to the cause, *in the direction in which it is now applied?* There are other modes of application which have been put in operation in other places, and which have not failed materially to promote the cause. We will not designate those modes at present, but at some future time, when the hurry and bustle of the present has passed away, may suggest some of them for the consideration of those who are leading in these matters.

Our purpose now is to make record of the fact that certain societies have held their usual exhibition, and to notice, briefly, such leading points as seem to us essential.

We commence with the Show of the *United States Agricultural Society*. From the accounts we have seen and heard, we should judge that if it was not a failure in one respect, it was in another—that is, that it failed to be conducted with harmony, and gave satisfaction to none. *Twenty-seven thousand dollars*, it appears, were appropriated in making preparations and paying premiums, and persons employed. The expenditure of such a sum ought to secure obvious and permanent good results. That it has done any such thing we have yet to learn.

Nearer home, on Wednesday, Sept. 26, the first annual Show of the *Bristol County Agricultural Society* commenced at Myrick's Station, and continued two days. There was the usual display of farm products. About a thousand persons sat down to the dinner table, which was a capital feature of the occasion. Speeches of an entertaining character were made by Charles T. Russell, of Cambridge, Rev. Mr. Brigham, of Taunton, Hon. Thomas D. Elliott, of New Bedford, and others. The officers chosen for the ensuing year are: President—Dr. Nathan Durfee, of Fall River; Vice Presidents—J. D. Thompson, of New Bedford and Laban McWheaton, of Norton Recording and Corresponding Secretary—Robert Adams, of Fall River: Treasurer—S. A. Drew, of East Taunton; Auditor—Charles P. Robinson, of Raynham; Chairman of the Board of Directors—John M. Howland, of New Bedford.

The *Hingham Agricultural and Horticultural Exhibition* took place Sept. 22 and 23, and we learn was a fine exhibition in every respect. The people generally took a great interest in it, and attended it in large numbers.

The *Essex County Show* took place at South Danvers, Sept. 26th and 27th. The display of live stock, fruits, &c., was large, as usual. The address was given by Prof. Russell, of Salem. He said "the Frenchman who deplored his want of means to enable him to make a foreign tour turned his attention to his garden, and there discovered wonders he had not before dreamed of. These wonderful discoveries were in the reach of every farmer. Agriculture could be pursued as an art, and it was a matter much to be regretted that so many farmers, in their cultivation of the soil, in their general arrangements about their fields, and buildings, and in their social relations, exhibited the marks of an age that ought to have passed away. They were full of wise saws and signs, but took no note of the signs of the times. The barbarous ages of agriculture still lived, and the best condition we saw was but a development of that culture. To the nomadic tribes of this continent were we indebted for corn, pumpkins, beans and sweet potatoes.

But as an art agriculture becomes a branch of national industry, and has relations with national prosperity. The poorest farm in Essex county ought to borrow some of the advantages of the improved cultivation of the day. A well laid out and carefully cultivated garden ranked among the highest products of artistic skill. The first settler in a new country finds the trees usurping the soil. They must be removed to let in the sunlight, but before the circle is completed he is again found restoring trees in the places of the primitive giants.

Obstacles to good agriculture were found in the too prevalent idea that the cultivation of the soil was not the most honorable occupation, and from an idea that scientific farming was too expensive. He thought agriculture ought to be taught to those who are to teach again. At the base of agriculture lay chemistry and botany. There was no science so elegant, so refined, and so suited to the youthful taste, as the study of the vegetable kingdom. Even the weeds that clustered about the school-house, and looked in so lovingly, were ob-

jects of interest, and seemed to covet the knowledge denied to them by their organization. Would it not be as well for a boy to study the wood that is consumed in the school-house stove as to learn unpronounceable names of foreign countries? If men would have their sons settle near the family hearth, let them make the farm attractive. Adorn your dwelling with flowers, and encourage your children to cultivate them. Do not laugh at the boyish or girlish love of a flower in a cracked teapot. Labor was relieved of half its toil when smiled upon by the elegancies of life; and the kindest hearts were those of people who cultivated the tulip, where more practical persons would have had a potato patch."

The officers elected for the ensuing year, were, President—Allen W. Dodge. Trustees—Horace Ware, Marblehead; E. S. Williams, Newburyport; P. O. Hatch, Hamilton; G. B. Loring, Salem; Richmond Dole, Georgetown; John B. Jenkins, Andover; Robert Brookhouse, Jr., Salem; J. Newhall, Lynnfield; J. M. Ives, Salem; Paul Titcomb, Newbury.

The Society voted to instruct the Trustees to take into consideration the expediency of holding their exhibition in future at the Society's farm in Topsfield. The Society numbers about 1000 members, has funds amounting to $10,000, a farm in Topsfield—the gift of the late Dr. J. G. Treadwell, valued at $6000—and a library valued at about $1500.

The *Waltham Agricultural Library Association* held their third exhibition Sept. 26th, continued three days, showing considerable progress in the products of the earth, and that the citizens of that beautiful town are energetic and intelligent.

The *Merrimack County, N. H., Agricultural Fair* was holden Sept. 27th, at Concord. The exhibition was a fine one. Address by Eli Thayer, of Worcester.

The *Franklin County Fair*, at Greenfield, went without its usual second day, its cattle, its address, its dinner, its speeches, and yet was very successful, interesting and profitable. There was a fine display of sheep, especially.

The *Housatonic Cattle Show and Fair* was holden at Great Barrington. One novel feature of the Show was the exhibition of a new patent telegraph instrument, working inside the hall. The address was by Stephen E. Burrall, of New York.

The *Carroll County Agricultural Fair* took place at Sandwich, N. H., and is reported to have been a good and successful show.

The *Annual Exhibition of the Maine State Agricultural Society* was holden at Portland. This was their sixth exhibition, and has been a successful one. Every department of the farm, we learn, was well represented.

The working cattle, from their various breeds, made a fine display, and showed to advantage the various excellencies they possess. To mark the improvement which a few years have brought about in the size of cattle, one has but to look at the beef creatures now, and call to mind what they were before cattle shows prevailed. Time was, and that not so very long ago, when, if a butcher slaughtered a creature which, when dressed, weighed a thousand pounds, he made a great ado about it, and told all his neighbors. Now the butcher looks for 1500 or 1600 pounds to the creature, and generally gets it. This fact speaks decisively concerning the improvement that has been made in meat culture. It is a practical fact which all can understand. Agricultural exhibitions have created this fact.

The Eighth Exhibition of the *Worcester North Society* was holden in Fitchburg, Sept. 25th. No premiums were offered for neat stock. The address was by Dr. George B. Loring, of Salem. Subject—"The Social and Civil Condition of Farmers." The Society and others dined at the Fitchburg Hotel.

AMERICAN GUANO.

Extracts of letters and reports of Baron Von Liebig, President of the Royal Academy of Sciences, and Professor of Chemistry at Munich, upon the American guano from Baker's and Jarvis Islands, forwarded to John B. Sardy, as agent for Wm. H. Webb, by James R. Mac Donald, Esq., United States Consul at Hamburg. Under date of Aug. 11th, 1860, Mr. Mac Donald writes:

"Enclosed I send you a letter of much importance, containing a report from Baron Von Liebig, which leaves nothing to be desired. Prof. Liebig, after reporting the analysis of the Guano in the most scientific manner, (and by various tests,) states 'that there are no analyses made on order in the chemical laboratory of the Royal Academy, and that I take charge of this examination by exception, not to gain something by it, but as I felt a great interest in the matter, * * * and I have spent two months' labor in the matter. * * * The Baker's Island guano contains more phosphoric acid than any other known fertilizer; and it is similar in its ingredients to natural phosphorite, differing from it, however, in the following remarkable particulars: Phosphorite is in a crystalized state, and is completely insoluble in water. The Baker's Island guano, on the contrary, is amorphous, is soluble to a considerable extent in pure water, and when moistened, colors litmus paper red. The Jarvis Island guano has also an acid reaction, and is partly soluble in water. It is worthy of remark, that the Jarvis guano, although only half as rich in earthy phosphates as the Baker's, gives to water a greater quantity of soluble phosphoric acid. I regard the discovery of these guano deposits as a most fortunate event for agriculture. At the present time the prices of fertilizers like bones are now continually on the increase, and soon the agriculturist will not be able to procure, at paying rates, an amount

sufficient for his wants. Baker's Island guano, being of all fertilizers the richest in phosphoric acid, will be of especial importance. As far as chemistry can judge, there is hardly room for a doubt that in all cases where the fertility of a field would be increased by the use of bone dust, the Baker's Island guano will be used with decided advantage. The phosphate of lime in the Baker's Island guano is far more easily dissolved than that of bones, and if we take the proportion of that ingredient to be sixty pounds in the latter, one hundred pounds in the Baker's Island guano are equivalent to one hundred and forty pounds of bones. Thus the agriculturist would be benefited as much by using seventy pounds of Baker's Island guano as by one hundred pounds of bone dust. This guano contains in ammonia, nitric acid and azotic substances, nearly one per cent. of active nitrogen. A small addition of salt of ammonia would give it the full strength of Peruvian guano.

"'For turnips, clover, &c., the Jarvis Island guano is just as good as the Baker's. Judging simply from its per centage of phosphates, it is of less value as an article of importation; but it is rich in sulphate of lime, which is also a fertilizer, and its phosphoric acid is of higher value, as nearly half of it exists in soluble phosphate of lime. The Jarvis Island guano would seem to be an excellent means of restoring cotton or sugar plantations whose soil has been worn out by long-continued cultivation. I think it is preferable to Peruvian guano, which, being rich in ammonia, tends rather to great development of leaves and stems.'"—*N. Y. Journal of Commerce.*

A PLEA FOR THE CROW.

A series of articles on birds, in the *Atlantic Monthly*, understood to be from the pen of Wilson Flagg, of Beverly, Mass., has given that work a considerable reputation, in an ornithological point of view. In a recent number, the author speaks a good word for the crow, and we hope all our readers will read the following extract, and then judge as to the truth of the statement:

"He consumes, in the course of the year, vast quantities of grubs, worms and noxious vermin; he is a valuable scavenger, and clears the land of offensive masses of decaying animal substances; he hunts the grass fields, and pulls out and devours the underground caterpillars, wherever he perceives the signs of their operations, as evinced by the wilted stalks; he destroys mice, young rats, lizards and serpents; lastly, he is a volunteer sentinel about the farm, and drives the hawk from its enclosures, thus preventing greater mischief than that of which he is himself guilty. It is chiefly during seed-time and harvest that the depredations of the crow are committed; during the remainder of the year we witness only his services, and so highly are these services appreciated by those who have written of birds, that I cannot name an ornithologist who does not plead in its behalf."

GALVANIZING SILK WORMS.—Silk worms require as much persuasion to induce them to work as the laziest negroes. M. Sauvageon reports to the Academy his experience in the matter. Finding the little things torpid and unwilling to work, the idea struck him to stir them up by electricity. The results, as he gives them, are really marvellous. He took fifty-three worms at random from among thousands belonging to a neighbor, put them every day on a sheet-iron plate through which a current of electricity was passed, kept them each time as long as they could stand it, and now has fifty-three beautiful cocoons, an amount which his neighbors will not obtain, to all appearances, from several thousand ungalvanized worms. If these results may be relied on, he has made a very valuable discovery.

For the New England Farmer.

SHINGLING.

MR. EDITOR:—A correspondent in the *Farmer* asks, "What will make shingles last longer?" Twenty-three years ago I found I had quite a lot of refuse shingles on hand, both sappy and shakey, and I laid them on the back kitchen and woodshed.

I have just examined them, and think they will last at least seven years longer. The building has not leaked, to my knowledge.

I soaked these shingles in a very thin whitewash made with brine instead of clear water. There has been nothing done to them since, although I have no doubt that to have whitewashed, or served a coat of dry-slaked lime or fine salt once in two or three years on them, would have been of great advantage to them.

As I shingle differently from almost any one else, I will give you my method, and my reasons for it.

However wide the shingles may be, I do not allow the nails to be put more than two inches apart.

Reason.—If your shingles are wet or green, and the wide ones are nailed at the edges, the shingle must split, or one of the nails must draw when the shingle shrinks. If the shingle is dry it must huff or crowd the nail out when it swells. Thus your nails are kept in constant motion by every shrink or swell of the shingle, till they are broken, pulled out, or the shingle is split.

I do not want the nails drove quite in, or so as to sink the head.

Reason.—The heads of the nails hold up the butts of the next row of shingles, and give the air a free circulation.

I lay all my shingles in whitewash. I prefer brine for making it. I line with red chalk. I then whitewash the last course laid down to the line, and after the building is shingled I whitewash the whole of the roof.

Reason.—To make the shingle last twice as long as they would without the whitewash, and I consider it much better than just whitewashing the roof after shingling.

Carpenters often object to shingling in this way, as it is rather dirty work, and declare they know it does not do any good—that it is just as good to whitewash after shingling, &c.

Hollis, Sept. 29, 1860. ED. EMERSON.

REMARKS.—Capital. A common practice of these suggestions would probably save thousands of dollars in time, lumber and nails, annually.

EGYPTIAN CORN.

Some time in May last, Mr. M. E. Crandall, of Illinois, advertised what he termed Egyptian corn, in the columns of the *Farmer*, stating that "upon trial last year it was found to ripen, planted even the *first of July*. It is estimated, from its very prolific qualities, to yield 200 bushels per acre, and weighs by sealed measure, 65 pounds to the bushel. This corn was produced from some procured direct from Mr. Jones, our Consular Agent, directly on his return from Egypt. It requires no different culture from that of other varieties, and in the South two crops can be raised in one season on the same ground. It grows in the form of a tree, and twenty-two ears have grown upon one stalk, and will average from five to fifteen. For domestic use it is unparalleled. When ground and properly bolted, it is equal in color and fineness to wheaten flour. As a forage crop, by sowing in drills or broadcast, for early feed, there is no kind of corn so well adapted to milch cows, and none that will yield half the value in stalks or corn."

His proposition was, that to any person who would enclose to him one dollar, in stamps or currency, he would send, postage paid, sufficient corn to produce enough to plant, the following year, from twenty to thirty acres, together with the directions for planting and cultivation.

Some of our readers acceded to his proposition, and purchased the corn and planted it. One of them, Mr. ABRAHAM B. DAVIS, of Palmer, this State, has brought us a sample of the corn, stalks and all, taken up by the roots. He states that he planted it on the 28th of May, in a very favorable place, where the soil was rich, and having the advantage of wash from the cow-yard. The sample before us is about seven feet high, and has four upright shoots, all having sprung, undoubtedly, from one kernel of the corn. Three of these shoots are quite slender, the fourth being stouter, but not so large as the stalks of our common twelve-rowed corn.

On these four stems there were *five* ears of corn, each about six inches long, not filled out at the top, not ripe, and the kernels about the size of the small, eight-rowed Canada corn. There were beside these, eighteen ears set and silked out, but no corn on more than half of them! The stalks had an abundance of leaves, and we should think would make a good article for fodder, either green or dried.

We refer to this matter to show the results of one experiment with the Egyptian corn, and to ask our friends who "enclosed one dollar in stamps or currency," to Mr. Crandall, and who have grown the Egyptian corn, to inform us what success has attended the experiment.

TO HATTIE:

THE BELOVED AND DEVOTED DAUGHTER OF THE LATE A. P., DEERFIELD, MASS., U. S. A.

"The Farmer of the Valley; the Man of Pleasant Cheer;
Who weathered all the storms of life thro' many a passing year!"

Brown AUTUMN leaves and golden sheaves
Proclaim the harvest home;
They seem to say, "With us away,
The spirit land to roam."
'Twas Autumn's boast, a thronging host
Had joined her gorgeous train;
He waved his hand,—"Your gathered band
May pass, but I remain!"

WINTER comes soon, with glittering moon,
And radiant stars of night;
The sky abounds with sparkling crowns,
And spangled robes of light;
The mighty slain which swell her train
A valiant heart might fear;
But her cold hand could not command
"The Man of Pleasant Cheer."

Next, beauteous SPRING, on Earth doth fling
Her robe of living green;
Her dews and rain refresh the plain,
And raise to life the scene.
"For one more strife I'll cherish life,
And battle once again;
For loved ones near, and souls most dear,
I go not in her train."

Last, SUMMER came, with fragrant fame,
Array'd in blooming flowers:
And balmy June, with rich perfume,
Reviving long passed hours:
In bright array, she passed that way
With her attendant band:
"Welcome!" he said, then, bowed his head,
And soar'd to the Spirit Land.

No mortal sight can trace his flight:
Up mounts the deathless train,
As morning light upsprings from night
O'er hills of waving grain!
Midst shady trees at evening breeze
The Guardian Spirits say,
"Yon happy band to the Spirit Land
"Have passed through the Milky Way!"

Angels of might, with rapid flight,
Descend to join the throng;
With music sweet, the soul they greet,
Of him they loved so long.
On sportive wing, let wild birds sing
In joyous notes and clear,
And every June their songs attune
To "The Man of Pleasant Cheer!"

London, Nov., 1859. J. E. P.

For the New England Farmer.

SOIL FOR GRAPES---BARREN GRAPE FLOWERS.

I find in the *Farmer* several questions addressed to me by "W. D.," of Leominster.

First. If it is desirable to trench a strong, heavy soil two feet deep for grapes? I do not consider such a soil suitable for grape culture. As a general rule, the stronger and heavier the soil, the greater the necessity of deep trenching and draining.

Second. I do not lay down my vines in the winter—but if desirable, those trained to stakes are as easily laid down as from any other mode of training.

Third. At the time I wrote the article referred

to, I had not had much experience with the Delaware. As a table grape, I place it at the head of our native grapes.

Mr. Tyler, of Brattleboro', in speaking of my illustration of the imperfect grape blossom asks: —*Is it ascertained that the impression of these barren flowers is radical and perpetual, or is it a result of immaturity, which time will remove?*

I do not hesitate to say that neither time nor culture will remove the defect. I know of no instance, either in the animal or vegetable kingdom, where so glaring a constitutional defect has been cured.

Neither have I any confidence in vines that blossom five or ten years without showing fruit, and then suddenly become fruitful.

E. A. BRACKETT.

Winchester, Sept. 24, 1860.

AUTUMNAL SHOWS.

At the close of the late *Merrimack County, N. H., Fair*, the following list of officers was chosen for the ensuing year:

President—Moses Humphrey, of Concord.

Vice President—Nathaniel White, of Concord.

Secretary—Jonathan E. Lang, of Concord.

Treasurer—Enoch Jackson, of East Concord.

Directors—John C. Gage, of Fisherville, Aaron Whittemore, of Pembroke, Emery B. Bachelder, of Loudon, Moses H. Bradley, of Concord, and Daniel E. Colby, of New London.

The *Cheshire Society's Exhibition* was held at Keene, Sept. 25 and 26. It had a balloon and "trotting for the citizen's purse." There were 500 entries on the books. Neat Cattle, 183; Horses, 89; Sheep, 37; Swine, 14; Poultry, 8—28 specimens; Products of Dairy, 4; Manufactures, 48; Miscellaneous, 152; Fruit, 23 entries, comprising 348 varieties; Vegetables, 7. There were 10 entries for the walking matches; 9 for the trotting matches; 4 for plowing with horses; 6 for plowing with oxen.

The eleventh annual Fair of the *New Hampshire State Agricultural Society* took place on Tuesday, Oct. 2, and was continued three days. About 100 horses were entered; in a quite full account in the *Journal of Agriculture*, the reporter says of neat stock,—"we do not think there is so large a cattle show as there has been in previous years." *Sixteen* sheep, about a dozen entries of swine, and "but a few feathered animals were on the ground." Let us see how this looks analyzed and printed, thus:—

Horses,—100—Stallions.
Matched Horses.
Working Horses.
Family Horses.
Mares and Foals.
Geldings and Mares.
Colts.
Horsemanship.

Chief Marshal and some fourteen assistants, all mounted and uniformed with the tasty blue and red sash and rosette, first rode around the track for about one hour, when the track was cleared and the horses entered to

Trot for the Citizen's Purse.
Ladies' Equestrianism.
Ladies Driving in Carriages.
Family Carriage Horses.
Steam Fire Engines.
Base Ball.
Lady Thrown.
The Great Trot.
Pacing.
Walking Horses.
Foot Race.
Stallion Trot.

As this is the eleventh Annual Fair of the State *Agricultural* Society, and as the farmers of the State are supposed to be the agriculturists, let us see what they presented to make up an interesting and profitable attraction. Some of the horses belonged to them, undoubtedly—but probably more of them to those who are not farmers.

Neat Stock not much—"We shall notice this department more fully hereafter, when we have more room and time," says the reporter. The reader has noticed that something has been said about horses!

Sheep,—One Buck.
Two superior Sheep.
Sixteen of superior Breeds

Swine,—About a dozen entries.

Articles in the Tent, where the "display of fruit and vegetables exceeded that of any previous year," and "the mechanical and agricultural implements looked finely."

Plowing Match—Two entries of horse teams, and four to plow with oxen!

Such is an analysis of the Eleventh Annual Fair of the New Hampshire State *Agricultural* Society, which will enable the reader to see how much of the matter was agricultural, and how much something else. We do not refer to this society as being singular, but only as falling in with the popular, and as we consider it, most unfortunate practice which has been adopted by many similar associations. Under these delusions, the management of these shows is rapidly passing out of the control of the farmer, his products are dwindling down to insignificance, and that *animus*, which was once imparted to the farming community through their agency, is diverted to another, and a questionable direction.

We approve of display, sometimes, of public gatherings for amusement and instruction, and believe that, as a people, we have too few holidays; but when we have a farmer's fair and festival, we think his mind should be directed and

devoted to the things that pertain especially to his occupation, and that the time should be appropriated to a careful examination, comparison and criticism of the articles exhibited for his inspection. The addresses and speeches should be pertinent to the occasion, and all the exercises allowed should also relate directly to an *agricultural* exhibition.

Why do not the members of the Corn Exchange send up a balloon at their annual meeting? Or the Directors of the Suffolk Mills get up a foot-race on quarter-day? Or the managers of one of the political meetings now so common introduce a "Punch and Judy" company to call away the attention of the assembled multitude from the matter in hand? Any of these would be just as consistent as the trotting or racing of horses, foot-races, the display of military or engine companies, or balloon ascensions on Cattle Show day.

One of two things will happen; the excellent institution which it has cost so much to establish, and which, in many cases, has received the fostering care of the State, will dwindle and die away—or the incongruous and inconsistent leprous spots that have been fastened upon it must be purged away,—they cannot long work in harmony. Such irrelevant matters have no claim upon the cause of agriculture, and have no right to embarrass its movements. We trust that in all arrangements for the future, this holiday of the farmer will be free from every extraneous influence. Let the cause stand upon its own merits, and not saddle upon it a thousand fooleries and vices which tend to degrade it and destroy its usefulness.

LIEBIG'S RULE FOR INSURING THE FERTILITY OF ANY SOIL.

There exists a receipt for insuring the fertility of our fields and the permanence of their crops, and which if properly and consistently applied, will prove more remunerative than all the expedients that have ever before been resorted to by agriculturists. It consists in the following rule:

Every farmer who takes a sack of corn or a hundred weight of rape, turnips, potatoes, &c., to the town, ought, like the Chinese coolie, to carry back with him from the town an equal (or, if possible, a larger,) quantity of the mineral constituents of the produce sold, and restore them to the field from which they have been taken. He should not despise the peel of a potato, nor a straw, but always bear in mind that that peel may be wanting to form one of his potatoes, that straw to form one of his ears of corn. The cost of carrying these matters to his fields is trifling, and the investment is as safe as a savings bank, and highly productive withal. The fertile area of his field will, in the course of ten years, be as it were doubled. He will produce more corn, more flesh, and more cheese, without having, on that account, to bestow greater labor and time upon the cultivation of his land; he will be less anxious about his fields, and need no longer keep his mind constantly on the stretch for some new, unknown, and imaginary expedient to preserve their fertility in some other way.

All the proprietors of the soil in every great country, (adds Liebig,) ought to form a society for the establishment of reservoirs, where the excreta of men and animals might be collected, and converted into a portable form. Bones, soot, ashes, leached and unleached, the blood of animals, and offal and refuse of all kinds, ought to be collected together in these establishments, and prepared for transport by the society's own officials.

To render the execution of a plan of this kind possible, government and the police authorities should take measures to insure the proper construction of latrines and sewers in towns, to guard against the waste of night soil, &c. This must, of course, be a preliminary arrangement; but when once made, an annual subscription of half-a-florin from every farmer in the land will suffice to call into existence establishments of this kind in every town, and there can be no doubt that these establishments would speedily become self-supporting, if every agriculturist would only make up his mind to act strictly upon the advice here given.—*Liebig's Lectures.*

For the New England Farmer.

PLOWING OF CORNFIELDS---FALL OF RAIN.

A writer in the *Scientific American* from Kentucky says, "It is a curious fact that the Yankees, with all their ingenuity, have never learned to plow a straight furrow, while every negro in the South will lay off a field, however large, without a bend of a foot in a single row. The furrows are not only straight, but parallel, the last one in a field in a quarter of a mile square always coming out parallel with the fence. A Virginia farmer sixty years of age told me that he never had a short row of corn in his corn-field in his life. In the new States where you see crooked rows you may know you are among people from New England, New York and Ohio, and when the rows are straight you will find that it is a settlement of Southerners."

The above is a good specimen of what some writers can say upon improved plowing and agriculture in general, when they really set about it. We have not been aware before this that there was such a difference between our northern farmers and their Southern neighbors on plowing straight or crooked furrows, and by negroes, especially. But this writer goes on to say, in substance, that he has never yet known a Yankee farmer that had learned to plow a straight furrow. To which I add that I have known several Yankee farmers that learned that art several years ago, and they have not forgotten it to this day. I am aware that, with all our great plows and implements of improved farming, too many crooked furrows are yet seen in our plowed lands. And if the Southern planters and their negroes can learn us, northern farmers, to lay out straight lands and then to plow even and straight furrows, why, then, this is just what we want. This re-

minds me of a story told me some years ago, about a planter giving out directions to one of his plowmen in laying out land to plow.

"Sambo, you see that cow on the other side of the field?"

"Yes, massa, I seed him."

"Well, then, mark her for a *stake*, and then plow right straight to her, and the furrow will come as true as an arrow."

"Yes, Massa, I'll jest do dat ting right off."

Sambo started his team, kept one eye on the cow and while she stood in her tracks it was well; but as she moved along to feed, Sambo had to swing to keep her in his eye. Finally the cow turned another corner, and Sambo, too, as he was bound to plow up to her, any way. At last he brought up at the other side of the field. "Well, is dat what you call straight furrowing 'cross de lot, Massa?" The furrow he had made was much like one of Tristam Shandy's curved lines on blank paper.

But to return to the subject. That there is too much guess work in laying out plowing lands, all plowmen will acknowledge. And if our Southern farmers are always in the habit of laying out their planting lands in measure, or by a tape line measure, then with a good team plow, and plowman that is a workman, they can turn their furrows true and straight. Again, in order to have no short rows in a corn-field, it is necessary that the field should be of equal length on the sides and ends. That is to say, if the field is 60 rods in length on the sides and 30 rods in width at the ends, then there need be no short rows of corn.

But should the field be 30 rods in width at one end, and only 20 rods at the other end, then here is an angle of unequal sides, so that if the rows of corn are marked straight each way, then the short rows of corn must come off on the side marked last. The short rows of corn are not of so much consequence, provided the rows are marked straight; it all depends on whether the field has equal sides or not. The plan of plowing lands in furrows to plant corn by, in order to make straight rows, may be all well enough for our Southern farmers; but I prefer to make use of the "corn-marker" for that purpose, and this is a simple implement which most of our farmers make use of at the present time.

Take a white oak or hickory scantling, seasoned, three inches square and twelve feet long, and in this bore holes with an inch and a half augur, so as to mark rows from two to four feet apart. Then take some well seasoned white oak timber, split out your pins for teeth, and make them about 15 inches in length. Fit the teeth so as to go up through the scantling, say a half inch flush above the top. Then take a small bit, bore through the teeth on top and fasten them with pegs. The teeth should be made larger in the middle, and taper down and round off on the points. Then take a pair of old plow-handles that are strong and mortice into the scantling for handles; next take a pair of old wagon thills, and your marker is ready for work. If your field has oblong sides, begin to mark on the longest straight side first, then the short rows will come off on the side that is marked last, marking the field both ways. The outside teeth of the marker must follow each on the inside mark; this will guage the width of the rows correctly, so that you mark one row less across the field, than there are teeth in the marker. That there is much advantage in having the rows of corn run straight through the field both ways, all farmers must acknowledge. It lets the sun shine on all sides of the corn rows alike. And then, again, you can cultivate close to the rows of corn without fear of tearing up the hills, as is the case when the rows are in and out.

There is an idea abroad, I presume believed in by many, that for years past there has been a gradual diminution of rain-fall over the country at large. I see that this same idea is now prevalent in some parts of Great Britain and that some prizes are offered to such men and writers as will investigate this subject, by the Scottish Meteorological Society. Now, in regard to our own country, on the subject of rain-fall, it is my opinion when facts are brought out that no falling off of rain has taken place in this country during the past fifty years, or the average fall of that time; also, my opinion is, that the same facts with regard to rain-fall in Great Britain will hold true after a fair investigation of the subject. But I will confine my remarks on this subject, in the main, to this country.

The arguments which the advocates of rain diminution make use of are various. Principal among them are that the cutting off of timber over the country has a tendency to diminish the water in running streams, brooks and springs. This causes less evaporation of moisture to rise in the atmosphere, and so less clouds to form and come down again in rain. This may be true to a certain extent upon new lands, where the growth of wood and timber has been cut off and the soil reduced to cultivation. But still over the old sections of country the amount of surface water in streams, taking an average of ten years together, will remain about the same. Again, taking an average of ten years together, there will be found as much rain-fall over the country as there has been in the past fifty or one hundred years. The grand processes of nature are always at work, and why should they not produce similar results in every generation or decade of years, in the atmosphere, as well as upon the earth's surface? But if it is true that the fall of rain is diminishing yearly, pray how long is it since this work of diminution begun, and when will it end? And, also, how long or what proportion of years will it take to make this country as dry as the Sahara Desert for lack of rain? For if this doctrine is true in theory or principle, this calamity must at last overtake us. It is a well-known saying in regard to the weather that extremes follow each other. This, in general, is a true saying. Hence from November, 1853, to May, 1854, a period of six months, more rain fell, causing greater water floods than were ever before known in all this section of country.

This was followed by a strong drought that set in about the middle of July of the same year and continued till the 10th of September, burning up the surface soil and grass, also killing many trees on gravel soils. Since that time there has been no drought to speak of to injure vegetation. Although for a year past springs and brooks have been very low owing to the fact that through the last winter and spring no long continued heavy rains took place, and so in the spring all streams were low and have so continued till the present

time; still there have been showers and rain enough to keep the grass and crops in a good growing condition; so that on the first of August the surface of the earth was as fresh and green as ever, and looked as well as in June. I can call to mind twenty-five and thirty years ago, droughts such as have not taken place in the past fifteen years at least. I can mention in succession the years of 1832–33–34–35, as being summers of great drought and scarcity of water, especially in the season of 1835, when the drought began in May and continued till the next February. The severe winter of 1835–36 set in with no water in the swamps, so that cattle had to be watered at the wells of which many were dry. So these droughts are not new to this country, but are found to be old acquaintances in all generations.

I was passing over a section of country in the east part of this town, (Derby,) a few days ago, through a by-road that leads into the forest, over which I had passed before when a seven years old boy, almost eighty-five years ago. At that time I remember passing a swamp of some six or eight acres in extent, filled mostly with green flags and large bunches of alder bushes. The flags were as thick and as high as a man's head. This was in the month of August, and men were at work in the swamp at that time cutting flags for chair-bottoms, &c. But when I passed this swamp the other day, what was my surprise to see the flags all gone, probably years ago, the alder bushes were gone, and this swamp, that was, now presenting a smooth crop of clear bog grass. Probably all the improvement ever laid out was to cut the alder bushes, and to open a ditch part way round, which has now filled up again.

I mention this fact to show that the grand processes of nature by washing in soil from the high lands around have made this swamp what it is today, scarcely aided by the hand of man. And this leads me to Farmer Hews' theory of soil culture and swamp lands. "What's the use of spending your time to drain swamps, when, if you let 'em alone they will drain themselves in time and save you the trouble and expense, tew. For don't you see that we have got more upland that's dry than we reap. Then, again, its goin' agin natur and Providence tew, tu drain land, and taint right nuther. For you see if Providence had meant tew have the land all dry he would have made it so for us in the first place; I say its agin natur and the Gospel. You see agin that this swamp water is wanted in our hot, dry summers for our cattle to wade in and drink—and for frogs, water snakes and mud turtles to live in and breed in; no, it aint right."

Yes, brother Hews, you have made a good argument for your side on drainage, quite as good as some scientific men make for the opposite side of the question. But, to conclude, probably no year passes by but that some section of the country suffers from drought. In portions of Vermont and Maine, the present season, the farmers are speaking of a parched soil, burnt grass lands, dry streams, and grasshoppers. So, also, in some of the Western States, and more especially in Texas. Again, where the droughts continue for a series of months and years together, the climate is more of a tropical character, like Florida and Texas, than that of our Northern States; when the rain does come, it falls in heavy bodies. Such is the character of our summer storms and thunder showers, principally. Finally, I let this anti-rain theory go as I find it, believing it to be a subject which farmers need not trouble themselves about in growing crops, but trust this matter to Providence.

Derby, Vt., 1860. L. DURAND.

A SENSIBLE MOVEMENT.

At the annual agricultural exhibition of the Worcester South Society, at Sturbridge, instead of an address in the church on the day of exhibition, the following questions were propounded for discussion:

1. Can the raising of wheat be made made the most profitable crop, of the small grains?
2. Is sufficient attention given to the raising of root crops?
3. Does the society offer sufficient encouragement to the growing of fruit?
4. Will it be expedient for the society to offer premiums on neat stock at the next annual exhibition?

We are glad to see this change in the usual stereotyped programme of our shows; not, by any means, because the addresses on the occasions are not pertinent and instructive, but because, when the farmer takes a part in the exercises himself, he will be just as much more interested and instructed, as he is more interested and instructed by laying hold with his own hands of the practical business of the farm. No man can appreciate and regard a fine fruit or shade tree, as he who planted and tended it in person, and so of most things on the farm. The gentlemen who engaged in the discussion of the first question, either acquired or imparted knowledge which will be remembered and applied many times more than it would have been if delivered in didactic precision, or if listened to coming in that style.

We should be glad if some of our friends would send us a report of that discussion.

For the New England Farmer.

REMEDY FOR THE POTATO DISEASE.

MR. EDITOR:—Some Jenny Lind potatoes which I have just been digging are badly diseased over the whole field, with the exception of a small spot on which, several years since, a coalpit was burned. As far as the coalpit extended the potatoes were bright and sound, with scarcely a diseased one among them.

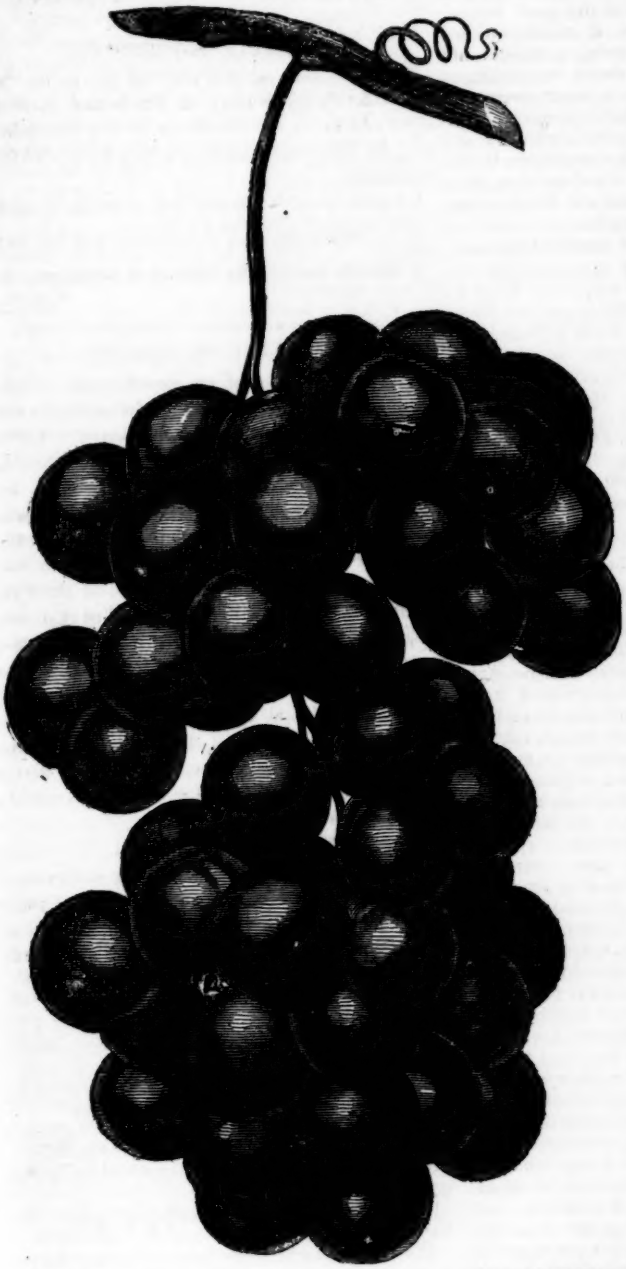
Now is it not reasonable to conclude that the particles of charcoal left in the ground preserved the potatoes from disease? And would it not be advisable for those farmers who can have access to such coalpit beds to put a small quantity of the dust in each hill of potatoes at the time of planting, next year, and thus prove its virtues by a fair trial? S. L. WHITE.

Groton, Sept. 25, 1860.

SHINGLING.—We hope every one of our readers who owns a shingle, or ever expects to have one laid *over his head*, will attentively read the article upon "Shingling," in another column.

DRACUT AMBER GRAPE.

We give below Mr. MANNING'S illustration and description of the "*Dracut Amber Grape,*" from a desire to bring before the public what some good judges of the grape have said to us is a good one, and worthy of cultivation,—and not because we have any knowledge of its merits ourself. It is not improper for us to suggest to all, that, in testing new varieties of fruits, it should be left mainly to persons of experience in such matters, and to those who will not feel the loss of a few dollars if they prove worthless.



MR. EDITOR:—I send you an illustration of the Dracut Amber grape, with information in regard to it. Also, the season of ripening of a few other varieties the present year. This is a new grape, but little disseminated; origin, Dracut, Mass., from seed. It ripened this season, the week before the great frost, Oct. 1, which destroyed most of the best class of grapes for table use.

The fact of its ripening ten days earlier than the Concord grape, is sufficient proof of merit. It is a strong grower, hardy, great bearer, color amber, or reddish tinge, cluster large, generally compact, but sometimes loose, berries large, and slightly oval; hold on the cluster very well. It possesses the foxy character to a moderate extent. It is a good eating grape, but not equal to a *well ripened* Concord or Isabella. It is a superior wine grape, making a large amount of light-colored wine in proportion to a given quantity of fruit, and contains nearly four per cent. more saccharine matter than the Concord grape, according to Dr. C. T. Jackson's chemical analysis, made in September, 1859, while testing samples of wine made from different native grapes by Mr. Weber, agent of Patent Office, who was sent out to collect promising specimens of native grapes. Mr. W. took seeds and cuttings of each variety to Washington for propagation and hybridization for future improvement. He examined the vine and fruit in my ground, and was well pleased with it. I caused a quantity of fruit to be forwarded to him, and the result of the test as a wine grape was highly flattering.

I exhibited the fruit at the rooms of the Massachusetts Horticultural Society's annual show, in 1859; it was also shown in 1860. No mildew was visible upon the leaves or fruit the past unfavorable and wet season, while many of the popular kinds mildewed badly, thereby preventing the fruit from ripening and the wood from maturing.

There will be dead wood upon many vines this year, but a good root, with a few good buds, will make the best of growth when planted out.

I find the autumn to be a good time to set grape vines, as a better growth is obtained the following season. Most herbaceous trees and shrubs do equally as well when fall-planted.

I have propagated a stock of vines, and procured the accompanying illustration, which is not overdone, either in size of berry or cluster, as both are frequently larger than the engraving.

I have ripened various kinds of hardy grapes this season, in my nursery. It is better to have a grape that will ripen with a certainty, in this latitude, even if the quality is not quite equal, as a table grape, to some, the crop of which cannot be relied upon. The following list perfected fruit, more or less, before frost, the present season:

Diana, good clusters, some well ripened, Sept. 25.
Delaware, not large enough to bear.
Rebecca, not large enough to bear.
Concord, fine clusters, nearly ripe Sept. 30.
Dracut Amber, ripe Sept. 18.
Northern Muscadine, ripe Sept. 20.
Hartford Prolific, ripe Sept. 20.
Sage, ripe Sept. 15.
Pearl, ripe Sept. 15.
Large Purple, ripe Sept. 15.
Strawberry Grape, good for jam, ripe Sept. 25.
Clinton, ripe Sept. 25.
Warren Seedling, ripe Sept. 20.
Early Isabella, new, ripe Sept. 25.

Reading, Mass., 1860. J. W. MANNING.

For the New England Farmer.

NEEDHAM HORTICULTURAL SHOW.

MR. EDITOR:—As your very just rule precludes all monotonous details of premiums, I will simply give you a little account of the Needham Horticultural Society, held at Village Hall, Needham Plains, on the evenings of Sept. 24 and 25.

Quite early in the day of Sept. 24th, the friends of the Society commenced sending to the hall contributions to the Fair, from the farms, kitchen and flower-gardens, work-shops, dairy-rooms, and the more fanciful domains of the ladies.

Seldom have been gathered, even by societies of more numerous years and more pretentious claims, a finer collection than the Hall presented, when all were duly arranged. It would be difficult to specify any particular department of excellence, for all in their own sphere excelled. There were apples very abundant and large, pears luscious and tempting, peaches, fewer in number, yet not without attractions, grapes reminding one of the clusters of Eschol, tomatoes of so many varieties as to show that these healthful vegetables are fully appreciated, large pumpkins and squashes, causing every one to anticipate family gatherings at Thanksgiving time, potatoes, beets, carrots, cabbages, &c., of no ordinary dimensions, and flowers in such profusion and tastefulness of arrangement as to prove that our citizens appreciate the element of beauty as well as utility. Last and not least in attractions, were the contributions of the ladies, consisting of a great variety of fancy articles, paintings and drawing, cone frames, worsted, bead, leather and wax work, embroidery, &c., all evincing much skill in devising and delicacy in execution.

In the evening, after an opportunity had been afforded to examine the articles on exhibition, the assembly was called to order by the President of the Society, Hon. E. K. Whitaker, who introduced Rev. E. S. Atwood, of Grantville. Mr. A. made a short, but highly interesting address. He was followed by Rev. Messrs. Green and Willard, of the Plain Village, in addresses appropriate to the occasion. The Society voted to continue the Exhibition the following evening, when the Report of the Committee of Arrangements, an ably arranged document was read by the author, Mr. C. E. Keith, followed by remarks from J. S. Whitaker, Esq., of New Orleans, who congratulated the society on the success of their exhibition, and compared the scene before him from the richness of its fruits and the beauty of its flowers, to the paradise of old. Also by Dr. J. Noyes upon the cultivation of plants and vegetables, and Rev. A. Harvey, of Oakland Institute, upon the richness of the soil and healthy locality of Needham.

H. N. B.

PRUNING OF GRAPES.

We have often heard the remark made—"*I forgot to trim my grape vines last fall, and now they must run at random, another summer.*" Let us suggest to thee, friend reader, that at any time after the foliage has all fallen from the vines, you go among them with your twig cutters, and prune, before the weather gets so cold that you will find no enjoyment in the pleasant labor. It is true, that, for several seasons, we have had little encouragement to cultivate the grape, but that must not prevent us from doing what lies in our power to secure a crop—for the next season, and a series of seasons may follow, that will be favorable.

If shade from the vines is desired, let them run profusely, merely cutting off such laterals as you do not want,—but if you wish them kept within your control, do not allow them more than six feet in height, and cut down the side branches to within two buds of the main shoot. By doing this, and pinching off the straggling shoots next summer, the vine may be kept compact, under your control, and with a plentiful application of wood ashes, and a little bone-dust and manure, all your labor will quite likely be amply repaid.

HINTS FOR THE FARMER.—Dig your potatoes when the ground is dry, you can then gather them free from dirt; then stow them away under cover, where the frost will not touch them.

Toads are the best protection of cabbages against lice.

Plants when drooping are revived by a few grains of camphor.

Sulphur is valuable in preserving grapes, &c., from insects.

Corn meal should never be ground very fine, as it injures the richness of it.

Turnips of small size have double the nutritious matter large ones have.

Rats and other vermin are kept away from grain by a sprinkling of garlic when packing the sheaves.—*Ohio Valley Farmer.*

CULTURE OF TREES.

1. The healthful development of fruit trees, as of other living substances, depends on the regular reception of a certain quantity of appropriate food. This food, whether derived from the earth, air, water, or other natural elements, is conveyed through the medium of the atmosphere and the soil. While we have only an indirect and imperfect control of the atmosphere and other meteorological agents, the Great Arbiter of Nature has committed the *soil* directly to our care and treatment.

2. To this I may add the general sentiment in favor of thorough and perfect drainage, beneficial to all cultivators, but indispensable to the fruit-grower.

3. Not less uniform is the experience of the salutary effects of a proper preparation of the soil for fruit trees, both in the nursery and in the orchard.

These principles are settled in the minds of all intelligent fruit-growers; but they need to be often promulgated and enforced. It should be equally well understood that success depends upon the adaptation of the habits of the tree to the constituents of the soil, the location, and aspect or exposure. A disregard of this principle, and the fickleness of seasons, are among the most common causes of failure, not only among inexperienced cultivators, but amongst professed pomologists.

More attention should be given not only to the location, but especially the aspect of trees. A common error is to disregard the time of ripening. * * *

The sentiments contained in the communication of Mr. J. J. Thomas, at our last session, against the growth of any other crop in orchards, especially against relying upon small circles dug around trees in grass ground, as a method of culture, deserves to be held in perpetual remembrance. Equally injurious, in my own opinion, is the habit of deep digging or plowing among fruit trees, thereby cutting off the roots, and destroying the fibrous feeders, which frequently extend beyond the sweep of the branches. However necessary the practice may be of cutting off roots in old orchards, in the process of renovation, it should be carefully avoided in grounds properly prepared, and where the trees are in a healthy or bearing condition. From experiment and observation, I am persuaded that working the soil among fruit trees, to the depth of more than three or four inches, should be carefully avoided. The surface should only be worked with a hoe, or scarifier, for the purpose of stirring the soil, and keeping out the weeds. * * *

NEW NATIVE FRUITS.

Changes of opinion have also taken place in regard to the acquisition of new sorts of fruits. Formerly we looked to other countries; now we rely more especially on our own seedlings for the best results. When we reflect upon the great number of new varieties which have, in our time, been raised from seed, and the progress which has thereby been made, no apology need be offered for repeating what has been said in former addresses in commendation of this branch of pomology. It was my first, so it shall be my continual and last advice: "Plant the most mature and perfect seed of the most hardy, vigorous and valuable varieties, and, as a shorter process, ensuring more certain and happy results, cross or hybridize your best fruits."

What wonders this art has already accomplished in the production of new and improved varieties in the vegetable kingdom! How much it has done for the potato, the turnip, and other vegetables,—producing, from a parent stock of inferior grade, numberless varieties of great excellence! How it has brought forth, from the hard, acrid, and foxy grape of the woods, the delicious varieties that are now obtaining notoriety and extension; from the bitter almond, the luscious peach and nectarine; from the austere button-pear of the forest, the splendid varieties that command our admiration; from the sour crab, the magnificent apples which now constitute the dessert of our tables; from the wild raspberry and blackberry of the hedge, from the native strawberries of the pasture, those superb varieties which crown the tables at our exhibitions. We believe it is now admitted that our native varieties are more hardy, vigorous, productive, and free from disease than most foreign sorts. Thus we have seedling gooseberries free from mildew, and pears that never crack. Why can we not breed out the black wart from the plum? * * *

Truly we live in an age of transition and wonder! The invention of to-day supersedes that of yesterday, and in its turn is to be supplanted by that of to-morrow. No enterprise, however bold, adventurous, or vast, whether the construction of a railroad from the Atlantic to the Pacific; the laying of the mystic wire in old ocean's bed, or threading it through Behring's Straits and winding it around the globe, is too great for the capital, energy, or intelligence of the present generation. * * *

Discoveries, inventions, and improvements equally remarkable characterize all the arts of husbandry. Witness, in place of the forked stick of the ancients, or the wooden plow of our boyhood, the improved iron plow of every model, and adapted to all kinds of soil and situation; and, still more marvellous, the Steam Plow, moving as a thing of life across the broad prairie, turning up its numerous furrows at once, and leaving behind it a wake like that of a majestic ship. Witness, also, instead of the rude hook, the sickle, or the scythe of the farmer, slowly and tediously gathering his crops, our mighty mowing and reaping machine, cutting down its ten to twenty acres per day.

The great industrial pursuit which this Society seeks to promote furnishes testimony of progress not a whit behind the most favored of the arts.

Behold the improved methods of cultivation; the vast number of nurseries and orchards, springing up everywhere, as by enchantment; the novel processes of reproduction, multiplying plants in endless profusion, and as by the stroke of a magician's wand. Witness the interminable lists of varieties now in cultivation, increasing with each revolving year, the restless and anxious desire to obtain everything new and promising from whatever country and sea-girt isle it comes; the refined taste for choice fruits rapidly extending through every gradation of society; the standard of pomology, like the star of empire rising in the east, moving still onward to the west, and ex-

citing the attention and astonishment of mankind.

But this progress results from no supernatural power. It is rather an illustration of human capability, acting in conformity with natural laws, and in harmony with the benevolent designs of the Great Husbandman for the amelioration of society, and the display of His infinite wisdom and love, "sought out of those who take pleasure therein." It exhibits the conquests of mind over matter, the dominion of man over nature, improving, adorning, and elevating her to the highest and noblest purposes of her creation.

Inspired with these sentiments, let us take encouragement, and press on in the career of improvement, ever remembering that study and experience make the man; and that, for the highest attainment and the greatest success, we must depend upon the culture of the mind as well as of the soil.

"Survey the globe through every zone,
From Lima to Japan,
In lineaments of light 'tis shown
That CULTURE makes the man.
All that man has, had, hopes, can have,
Past, promised, or possessed,
Are fruits which CULTURE gives, or gave,
At industry's behest."

Wilder's Address.

SMUT IN CORN, WHEAT, AND OTHER GRAINS.

We have either given our corn-fields more special attention within a few years than we ever did before, and thus noticed the large amount of smut in them, or the smut itself has greatly increased. What is smut, and what causes it, and what will prevent it? are interesting and important questions. Some years ago, these questions were pretty thoroughly discussed here and in France. M. Philippar, professor of agriculture in the Normal school of agriculture, Versailles, France, asserts that smut is a parasite plant, belonging to the mushroom tribe of the genus *Uredo*. M. Poiteau declares that it is a local disease, contagious by touch, and not a parasite plant. M. M. Tillet and Tezzien, M. Benedict Provost and M. de Candolle have written much upon this subject, and have all expressed their opinion that it is a parasitical plant, of the mushroom kind, and agree in the main and more essential points with M. Philippar.

A parasitical plant is a plant that derives its aliment from that on which it grows. A *fungus*, a parasitical plant or production of a cellular texture, having no flowers, and deriving its nutriment from the atmosphere, and nourished also from the stalk, stem or spawn. Its propagation is effected by means of small and very curious seeds, *spores*, or *sporules*, enclosed in skinny integuments, called *sporidia*, or spore cases. Animal and vegetable substances in a state of incipient decay, are those which most generally produce fungi, but those of the simplest organization frequently locate on tissues. Of this class, we may enumerate common mouldiness as being the most familiar and best known. Of this, however, there are two types—the first of which, when examined by a microscope, is found to exhibit jointed threads, and to consist of a cellular structure, the small cavities or cells being arranged "end to end," apparently independent of each other, and capable, under certain contingencies, of reproduction. The second type presents the aspect of a thread-like structure, the spores being elevated on the tops of the threads, or processes, and sometimes very thin and minute capsules or cases, which explode and thus cause the dispersion and dissemination of the seed.

The ordinary puff ball found in our fields is but a fungus, yet in a more elevated phase of development than either of the cases named. There is a determinate figure, and the mass is composed exclusively of cellular tissue. If we cut a puff ball, we shall discover that the interior, or central section is all *spores*, and this as it matures and dries, leaves only the dusty spores, which, in their ripened condition, give character to the ball. We may here remark, that fungi are respectively eatable, poisonous, medicinal and intoxicating, and sometimes luminous. A French writer of eminence, M. Poiteau, declares smut to be a local disease, contagious by touch, and *not* a parasitical plant. In commenting upon the theory of M. Poiteau, a late able writer observes:

"His arguments for and against his opinion are given at great length. We shall, in a concise manner, bring them before our readers; and first, his reasons for deciding against the 'mushroom,' theory. When smut was first declared to be a plant, the labors of the microscope, applied to botany, were very imperfect; matters were declared to be *uredos*, *erinees*, and *erysiphes*, which have since been discovered to be insects' nests or tissular maladies to which the plant was subject. Hence it followed that as microscopic botany became better known, these pretended plants gradually disappeared from the following editions of botanical works. Now these plants have been generally classed in the category as the 'smut;' and as these have been proved to be *not* of the 'mushroom' race, so may smut also."

The opinions of some living agriculturists are cited by M. Poiteau, who consider smut to be "an irritating humor, placed in the plant by the puncture of an insect, invisible;" on account of its smallness; but he gives no proof that this can be the case; he only asserts that such is the opinion of men worthy of being listened to, from their experience and habits of observation. He brings forward the fact mentioned by BOSE, who says, "A most remarkable thing, is that if the thick oil which is taken from smut by distilling it, by holding it over a hot fir is

placed in contact with sound grain, nearly one third of the ear will be affected by smut." M. Poiteau maintains that this is altogether inexplicable, unless smut be contagious by touch; but even allowing this, it is no proof that the former opinions may not be well founded. M. Poiteau says that every experiment tried by M. Philippar, proves as much for the opinion that smut is a disease, as that it is a parasite plant; but admitting this, M. Poiteau does not *prove* what he desires to, viz: that his theory is correct. He also attacks M. Philippar's declaration, that smut is propagated by seed, but we cannot find that he gives any *proofs* that such is not the case. He very fairly cites against himself, the *Memoire* of M. Benedict Provost, in which he distinctly states that he saw the smut change its appearance, and germinate: but M. Poiteau asks if that can be called germination which is nothing more than a change from round to oblong? If all changes which are seen in plants are taken for germination, every vegetable thing in nature should be deemed susceptible of germination. He gives M. Philippar great praise for his zeal and ability, but not the less insists that he is wrong.

We do not profess to give any opinion on the nature of smut, but are anxious to lay before the reader some of the views of others, and to call attention to what seems to us to be an increasing malady in our beautiful and profitable Indian corn crop.

INDIAN SUMMER.

At the open window I sit and see
The gorgeous clouds that are passing by,
And the soft south air is bringing to me
Perfumes as sweet as in June buds lie.
Even the bees are humming to-day,
And I catch the sound of children at play.

Did I not see the changing leaves
Brilliant in coloring as the sky,
And the reapers binding their golden sheaves,
I should say the summer had not gone by.
It seems as if nature had paused to think,
Before it should reach October's brink.

But with every breath of the scented breeze
There is rustling down a withered leaf,
And I hear the sighing among the trees
That is like the prelude to a grief—
And 'though the sun shines with a splendor like June,
By this I should know 'tis a fall afternoon.

At the open window I sit and see
Clouds that are passing—hopes that are past,
And the soft south air is bringing to me
Memories crowding thick and fast;
And some of the dreams I recall to-day
Are swept like the withered leaves away.

At the open window I still remain,
And my soul is vainly trying to see
Over the losses—on to the gain—
Knowing how much that gain would be.
Teach me, O teach me, how to wait
For the Summer so endless—Heaven so great.

Portsmouth Journal.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 4.

HAWKS.

Sharp-Shinned Hawk—American Gos-Hawk—Cooper's Hawk —Stanley Hawk—Broad-Winged Hawk.

The third sub-family among the *Falconidæ*, the *Accipitrinæ* (*proper hawks,*) constitutes a well marked group in the Falcon tribe, and is regarded by naturalists as the sub-typical section, and its members are readily distinguished by their long and expanded tails, and short and rounded wings, being often called the *short winged* Hawks. They are a courageous tribe, boldly attacking birds of quite large size, often seizing their prey upon the wing, or by pouncing upon it from above, and frequently rob the farmer of a portion of his young poultry, making amends for the same, however, in the destruction they wage upon the mice. Their flight is swift and strong, and in the days of falconry and hawking, these birds were considerably valued in the princely sports, but were considered less noble than the true Falcons, and were termed birds of hawking rather than of falconry. They are said to be rather sylvan in their habits, preferring wooded countries, and breeding in trees. *Accipiter* and *Astin* are the genera represented in the fauna of New England.

The SHARP-SHINNED HAWK, (*Accipiter Pennsylvaniensis*, Swain.; *A. fuscus*, Bonap.,) sometimes called the *Slate-colored Hawk*, is an elegant and daring little hunter, and by Audubon has been termed "the miniature of the Gos-Hawk" not only from its general appearance, but from its swift, vigorous and irregular manner of flight, and the velocity with which it dashes upon its quarry. Its habitat seems to be nearly the whole continent, as it has been seen far to the north, and is known to exist in the intertropical parts of South America; it is found throughout the United States, but according to Nuttall seems more particularly to abound in the thinly settled parts of some of the Southern States than elsewhere. Its food consists of small birds, from the smallest in size to the common Passenger Pigeon, mice, reptiles and chickens, the latter of which it will boldly pounce upon in the very presence of their keepers; and Nuttall speaks of twenty or thirty as being carried away by a single individual of this species in as many consecutive days.

The Sharp-Shinned Hawk, provincially known, in common with the other smaller Hawks, as the Pigeon Hawk, measures twelve inches in length, and twenty-one in alar extent; upper parts, dark slate blue, in the adult; under parts white, finely variegated with broad bars of ferruginous. The female is much larger, a fine specimen now before me measuring fourteen inches in length, and twenty-five in extent. The plumage of the young is dark brown above, skirted with ferruginous.

The AMERICAN GOS-HAWK or BLACK CAPPED HAWK of Wilson (*Astur atricapillus*, Bonap.,) is generally considered as a rather rare species, at least was so regarded by Wilson and Nuttall. Chiefly inhabiting the more northern parts of the continent, and migrating southward in the autumn, it is more commonly observed in fall and winter than at other times. It is said to be an extremely active and bold bird, sailing aloft in circles, or, when hunting, skimming near the

ground, along fences or hedges, and pouncing suddenly upon its unsuspecting prey. They subsist upon birds, mice, and even moles, and I once caught one in a trap baited with a living chicken. The present species is so closely allied to its European congener, the well known *Gos-hawk*, so highly noted for its feats in hawking, that by many it has been described as the same.

The length of this species is twenty-one to twenty-five inches; breadth of wing, about three feet; plumage above, fine slate blue, beneath, white, most elegantly speckled with fine, transverse, pencilled, zigzag lines of dusky. The Hon. C. L. FLINT, Secretary of the Massachusetts Board of Agriculture, in his last report on the State Cabinet, speaks of having received as many as twenty specimens of the Gos-Hawk during the year, (1859,) from which it appears that they are not so remarkably rare in New England as formerly supposed; and I am quite confident that this Hawk breeds in this vicinity, and that it is often seen skimming over our meadows and fields with a swift gliding flight.

COOPER'S HAWK, (*Astur Cooperi*, Bonap.,) a bird named by the Prince of Musignano in honor of WILLIAM COOPER, of New York, is an elegant and quite rare species in New England, though said to be common in the Middle States, particularly New York, in autumn and towards winter. A fine specimen, now in my possession, was shot a few days since while prowling about for chickens, it boldly alighting within a few paces of the house. It seems to be an active, fearless bird, and its depredations among the poultry are often quite annoying. The specimen before me measures nineteen inches in length, and thirty in alar extent. Color above chocolate-brown, darker on the head and neck, where it is edged with rufous and white; below, white striped with dusky.

The STANLEY HAWK, (*Astur Stanleii*, Aud.,) a new species of Audubon, in size and markings corresponds very nearly with the above (*Astur Cooperi*,) and is now generally considered to be the same in a different state of plumage.

The BROAD-WINGED HAWK, (*Astur latissimus*, Jar.,) by Bonaparte is placed in this genus, though approaching the Buzzards in habits and food, as well as somewhat in form. Sir William Jardin, in his excellent notes to Wilson's work, doubtfully places it in *Astur*, with the Hawks above described; but speaks of it as "one of those birds with dubious and combined characters." Though not abundant, it is occasionally seen in all the northern Atlantic States, particularly in the Middle and New England States, where it is generally resident, and is rarely seen as far south as Louisiana, even in our severest winters. Its food consists of small birds, chickens, ducklings, the smaller animals, and even frogs and snakes; and it is said to be rather sluggish in its disposition. The length of this Hawk, is fourteen inches; breadth of wing thirty-three inches; plumage above, dark brown, streaked with whitish on the head; beneath, white, marked on the breast with pointed spots of brown; female much larger.

The next section or sub-family of the *Falconidæ* that we meet, the *Milvinæ* (true Kites; *Cymindinæ* of some systematists,) is probably unrepresented in the fauna of New England, though a beautiful representative is found in the Southern States in the Swallow-Tailed Hawk (*Nauclerus furcatus*, Vigars,) and though rarely seen farther eastward than Pennsylvania, has, in a few instances, been captured in the State of New York, yet is sometimes seen in the interior as far north as the 44th degree of latitude. It is a bird of singular form and habits, devouring its prey, whatever it may be, in the air, and subsists largely upon insects. Jardins observes, "I am aware of none that feed so decidedly on the wing as that now described; in everything it will appear more like a large swallow than an acciptrine bird."

The next number, containing an account of the Buzzard (*Butecinæ*,) will conclude the diurnal birds of prey. J. A. A.

For the New England Farmer.

PIANO AND WASH-TUB.

MR. EDITOR:—In the *Farmer* of October 6, in an article headed "Piano vs. Wash-tub," are set forth notions and ideas, rather behind the times, to a part of which I would like to reply. I am not a son of a farmer, or the husband of a farmer's wife, or a husband of any kind. The writer addresses the "dear good ladies," of the present day, and asks them to compare their situation with that in which their mothers and grandmothers were placed; to compare their household appliances and utensils, rude and few, with the improved many of the present day; states that they, (the mothers,) knew no piano but the spinning-wheel, no seraphine but the wash-tub; that the cackling of hens, geese and turkeys, blended with squealings of pigs and lowing of kine, was music to their ears, and that they desired no better: and to sum up, they were considered far below the generality of women. Did they not rear from ten to fourteen fat, rugged sons and daughters and clothe them all, in summer and winter, substantially and comfortably, doing the spinning, weaving and making with their own hands? That they were educated as farmer's wives should be, not to play the piano, or make pictures; but to *spin* and *weave*, *bake* and *brew*, *make* and *mend*, while their husbands would plow and sow, mow and rake, reap and thrash, and in nine cases out of ten, they were contented with their lot.

Now, Mr. Editor, what do we see in all this, but work, work, dig, delve, eat, eat, drink; mere brute contentment? Certainly, no aims to intellectual or social enjoyment, no newspapers—*New England Farmer* included—no pleasant studies, music, drawing, painting, &c., nothing but "work, work, work." I admit, that on a pleasant Monday morning, in a back room, a "rub-a-dub," performed on a wash-board, with a door-yard accompaniment of clucking and cackling fowls, is a pleasing scene; can almost fancy myself looking on a similiar one in a particular place in New Hampshire. I think it quite an improvement in the times, as we now have both piano and wash-board in the same house, played by the same hands. I am acquainted with many people, old and young, of both sexes, who obtain their living, and a good one too, by diverse occupations and labor, and are good practical musicians and singers, their singing and playing not interfering with their business in the least; know a young lady who plays the seraphine, can drive four horses, and I have no doubt is a great help to her mother; know another who can get a good dinner,

play the piano while the men are eating, and can teach beside.

Look at our male musicians throughout the country; all are farmers, mechanics, artists, clerks, all engaged in some daily occupation. The "lot" of which Miss Spinster speaks, people will not be contented with in these days; machinery and improved implements of every description have lessened our labors. The tired farmer is not obliged to labor late in the evening, paring apples, husking corn, &c; machines help him do this, giving him most of his evenings in which to enjoy his books, papers, violin, the society of his family, neighbors and friends. If our parents and grandparents were contented with their lot, we have reason to be much more contented with ours, and if we are not, we are a thankless and thoughtless generation.

OLD BACH.

ON THE HILLS.

Princeton, October 16, 1860.

GENTLEMEN:—Why do not more of your novelty-seeking citizens come out here and get up higher in the world than they ever stood before? Even the denizens of Beacon Street might do this and find pleasure and profit in it, if pure air and a good deal of it, and renewed health are valuable. Here I am, up, up, I cannot tell how high, and yet old Wachuset looms up *nineteen hundred feet* higher than I am. Sixty feet below the apex are the white tents of the United States Surveying Party, having a good time when they can. Sunday night was a "buster" up there, and made lively work with every thing that was not tied down to peg or rock. The "rains descended and the floods came," and along with them snow and hail, and a breeze that would have started a California clipper through the water at twenty-knots an hour. One of the party up there said to me: "The wind blew fearfully that night." They are encamped sixty feet below the top, so that they lead a living spring, which they found half-way between them and the highest point, into the midst of their canvas village.

I came here last evening to have an agricultural talk with the people, which took place very pleasantly to myself, at least, at the Town Hall. I found many of them appreciating the blessings which their occupation confers, and with large views of its dignity and importance. They have established a Farmers' Club, and are entering vigorously upon some of the leading topics of improvement. Some of the young men were earnest in their inquiries as to the best modes of draining lands, as that is to be the subject of discussion next week. Hon. JOHN BROOKS, a member of the State Board of Agriculture, and one of the intelligent and progressive men of the age, has not only the disposition but the means to set many good examples, and he has done so in a highly commendable manner. If he is willing to risk the expenditure of $25 to $50 per acre in an experiment of underdraining, and the experiment proves a successful one, and increases the profits of crops ten to twenty per cent., that example settles the question for all his towns-people who possess similar lands. They need no longer to labor in doubt, but with the *certainty* of success. It is in this light that men of progress make themselves especially serviceable to the world. There are many excellent farms in the town, but my arrival there was too late to afford me any opportunity of looking at their stock, or at the crops they had just secured. The surface of the town is much broken by abrupt hills which are swept by fierce winds during several months in the year, and the roads in winter are often considerably obstructed with snow; but this admirably adapts the land to grazing purposes, so that fine steers, oxen and milch cows are produced abundantly.

With such pasturage the dairy becomes a prominent feature in their agricultural industry, and they produce butter of the most excellent quality, considerable of which, I was informed, is contracted for at thirty cents per pound in Boston market. Large quantities, also, of excellent quality, go to Worcester, where it is always in demand, the good people of that city being well acquainted with the butter-making skill of their neat mountain neighbors. The people of the town are intelligent, industrious and frugal, and look down upon the rest of the world with a wonderful degree of complacency, considering how elevated they are themselves!

Returning from the exercises at the Hall, I had an hour's pleasant chat with my kind host and his wife before a glowing wood fire in an open Franklin stove. The frost was sharp and the wind was up when I went to my chamber, and when fairly "under the cappers," I could not afford to lose at once in forgetfulness the delightful music it made as it swept from the snow-clad mountain behind me down to the world below. So in a dreamy state I laid and heard it sing its wild mountain song, sometimes fancying the sea before me, with its restless and never-ceasing waves trying to wash out the base of old Wachuset, but waking a little, missed the regular cadences of coming and retreating waves, and became sensible that I was in the region of old Boreas and his attendant train. The snow now lies in little drifts under the north side of fences and buildings, the remnant of Sunday night's storm.

My visit has been a pleasant one, for which I am greatly indebted to the attentions of Major S. S. HASTINGS and his kind lady, who took me in when cold and hungry, and set me down to a bountiful table before a good wood fire! Think of that, gentlemen, and believe me,

Very truly yours, SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN.

LADIES' DEPARTMENT.

For the New England Farmer.

DOMESTIC RECEIPTS.

KETCHUP.—I notice by your paper of Sept. 29, that "A Mechanic" wishes to know the best way of making tomato ketchup. I will give you my receipt.

Take one gallon of skinned tomatoes, fully ripe, one pint of sharp vinegar, two table spoonfuls of salt, one of black pepper, two of mustard, all ground fine, simmered slowly three hours in a porcelain kettle. Strain through a sieve. It may be used in three weeks, but improves by age. I have some now, that was made one year ago, and it is much better than when new.

CREAM CAKE.—Three eggs, one cup of thick cream, one of sugar, flour enough to make it as hard as pound cake, soda and spice as you like.

FRUIT CAKE.—Three eggs, two and one-half cups of sugar, one cup of sweet milk, one of butter, four of flour, a little soda, spice and fruit as any one wishes.

WHITE CAKE.—Three eggs, two cups of white sugar, one-half cup butter, one cup of new milk, three of flour, two teaspoonfuls cream of tartar, one of soda, a teaspoonful of extract of lemon or rose; dissolve the soda in water.

You may find better receipts, but these are good. A SUBSCRIBER.

Prescott, Mass., Oct., 1860.

WOMAN'S COURAGE.

No one can have read the statement of the clerk of the steamer, which went down on Friday night, without being struck by his description of the bearing of the ladies. "They were pale, but silent; there was not a cry or a shriek." The fortitude and resignation of men may have failed, but theirs failed not. So is it always in the great exigencies which women are called to meet. When troubles or dangers are but slight, they are more excited and more alarmed than men. But let an overwhelming calamity bury the fortunes and hopes of the husband, or father, or brother, in sudden night, let disease or accident strike him down and stretch him on the bed of keenest suffering, then when strong men's hearts fail them, when their nerves are unstrung, when quaking fear or hopeless despondency takes possession of their souls, the frail, weak woman rises with elasticity and calm determination to the demands of the terrible emergency, and with untrembling hand and cheerful voice hastens to perform those blessed ministrations, for which the might of men was inadequate. How many scenes of danger have we heard described, conflagrations, assassinations, shipwrecks, in which women have with heroic patience and submission bowed meekly to their fate, and have taught the sublime lesson of Christian resignation to the husbands and fathers who were with them. In the hour of trial her weakness becomes strength, her sensibility is swallowed up in faith. There were men of renown in the Lady Elgin, men whose names are known through the wide world, but none of them ever did a braver or more heroic deed than was achieved by those noble women who sat in silence awaiting their death.—*Providence Journal.*

REARING CHILDREN.

1. Children should not go to school until six years old.

2. Should not learn at home during that time more than the alphabet, religious teachings excepted.

3. Should be fed with plain, substantial food, at regular intervals of not less than four hours.

4. Should not be allowed to eat anything within two hours of bed-time.

5. Should have nothing for supper but a single cup of warm drink, such as very weak tea of some kind, or warm milk and water, with one slice of cold bread and butter—nothing else.

6. Should sleep in separate beds, on hair mattresses, without caps, feet first well warmed by the fire or rubbed with the hands until perfectly dry; extra covering on the lower limbs, but little on the body.

7. Should be compelled to be out of doors for the greater part of daylight, from after breakfast until half an hour before sundown, unless in damp, raw weather, when they should not be allowed to go outside the door.

8. Never limit a healthy child as to sleeping or eating, except at supper; but compel regularity as to both; it is of great importance.

9. Never compel a child to sit still, nor interfere with its enjoyment, as long as it is not actually injurious to person or property, or against good morals.

10. Never threaten a child; it is cruel, unjust and dangerous. What you have to do, do it, and be done with it.

11. Never speak harshly or angrily, but mildly, kindly, and, when really needed, firmly—no more.

12. By all means arrange it so that the last words between you and your children at bed-time, espcially the younger ones, shall be words of unmixed lovingness and affection.—*Hall's Journal of Health.*

ELDERBERRY WINE.—The quantity of fruit required, is one gallon of ripe elderberries for every two gallons of wine. For ten gallons wine take five gallons berries, boil them in five or six gallons of water, then strain the liquor, and whatever the liquor proves short of ten gallons, make up as follows: Add water to the pulp, stir it about and strain to the rest. Add thirty pounds sugar and two or three ounces hops. Then take three-quarters of a pound of ginger-root bruised, five ounces cloves, one of cinnamon, and put them together in a bag and tie loosely. Put the bag with its contents into the previous mixture, and boil two hours; when quite cool, ferment with yeast as you do beer. In two or three days draw the liquor off into a cask, suspend the bag of spices by a string not long enough to reach the bottom; paste over stiff brown paper. It will be fit for use in two months.—*Boston Cultivator.*

IT is well for us that we are born babies in intellect. Could we understand half what most mothers say and do to their infants, we should be filled with a conceit of our own importance, which would render us insupportable through life. Happy the boy whose mother is tired of talking nonsense to him before he is old enough to know the sense of it!